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MADAME DE POMPADOUR'S FAN.

FROM THE FRENCH OF ALFRED DE MUSSET.

I.

IN 1756, when Louis XV., weary of the quarrels between the magistracy and the legislature, concerning the tax of two sous on a franc, or the tenth of all incomes, resolved to pass the edict, the members of Parliament resigned their offices.

Sixteen of these resignations were accepted, and the sixteen refractory gentlemen were immediately exiled.

"Could you see," asked Madame de Pompadour of one of the

ministers, "could you see a handful of men resist the authority of a King of France, and look on calmly? Would you not have a poor opinion of him? Lay aside your robes of office, and you would see things as I do, M. le Président."

Not only did the exiles suffer from their insubordination, but their relatives and friends shared in their disgrace.

One of the king's amusements was the reading of other people's letters; to give himself this pleasure, he used to have his favorite read to him all that was of interest in the mail-bags, and,

under the pretext of performing for himself his own secret police service, he amused himself with the thousand and one intrigues which thus came under his observation; but whoever in the remotest degree was found to be connected with the leaders of the factious party was sure to be ruined. It is well known that Louis XV., with all sorts of weaknesses, had one strong point—that of being inexorable.

One evening, when he was seated before the fire, with his feet on the fender, and looking, as usual, very melancholy, the Marchioness de Pompadour, who was looking through a package of letters, shrugged her shoulders and laughed.

"What now?" asked the king.

"I have just come across," said she, "a most nonsensical letter; but it is a touching production, and excites my sympathy."

"How is it signed?" asked the king.

"It has no signature. It is a love-letter."

"And how is it directed?"

"That is the joke. It is addressed to Mademoiselle d'Annebault, the niece of my good friend Madame d'Es-trades. It was apparently for the sake of my seeing it, that it was stuffed in with these papers."

"And what are its contents?" persisted the king.

"All love, as I tell you. Vauvert and Neuflette are also mentioned in it. Are there any noblemen in those counties? Does your majesty know the families there?"

The king pri-



ded himself on knowing France by heart—that is to say, the French nobility.

Court etiquette, of which he had made a study, was not more familiar to him than the coats-of-arms of the aristocracy—a knowledge easily acquired, since it went no further. But he was vain of his familiarity with the nobility, who were in his eyes like the marble staircase of his palace—something to be used by their master to help him to ascend still higher. After having reflected a few moments, he scowled, as if suddenly struck by an unpleasant memory; then, motioning to the marchioness to continue, he threw himself back in his easy-chair, saying, with a smile:

"Read on; the girl is pretty."

Madame de Pompadour then, in playful mood, began to read a long letter full of love-sick passages.

"See," said the writer, "how Fate persecutes me! Every thing seemed favorable, and you yourself, my sweetest friend, had bidden me hope for happiness. Now, suddenly I must lose all, and that for a fault not my own. Is it not an excess of cruelty to have had the heavens opened before me, only to be plunged into the abyss below?"

"When an unfortunate is doomed to death, would it not be a barbarous torture to set before his eyes all which would make him regret death and cling to life? Yet such is my fate. I have no other place of refuge, no other hope, but the grave; for, from the moment of my misfortunes, I dared no longer dream of possessing you. When fortune smiled upon me, my fondest hope was that you would be mine; now that I am poor, I should hate myself if I still wished you to share my fate, and, since I cannot make you happy, though I am dying of love for you, I forbid you to love me."

The marchioness smiled at these last words.

"Madame," said the king, "he is a fine fellow. But what prevents his marrying his lady-love?"

"Let me read on, sire:

"This crushing injustice surprises me as coming from the best of kings. You know that my father asked a place for me as cornet or ensign in the guards, and that on this depended my fate, since it would give me the right to offer myself to you. The Duke de Biron had proposed me; but the king rejected the application in a manner which is not very pleasant to remember. If my father has his own ideas of affairs—admitting that to be a fault—ought I to be punished for it? My devotion to the king is as profound and as sincere as my love for you. I would prove the truth of both these assertions, if I could do so, with my sword. It is discouraging enough to have my request refused; but that I should be so disgraced without any good reason is something so different from the usual and well-known kindness of the king—"

"Go on," said the monarch, "it grows interesting."

"If you know how sad I am! Ah, my darling! this land of Neufllette, this garden of Vauvert, these groves—I walk through them all alone every day; I have forbidden the walks to be raked. The odious gardener yesterday came with his rake; he was just going to touch the sandy paths, where the impress of your light footsteps was yet remaining—the marks of your little feet and of your high-heeled shoes were still to be seen in the walk. They seemed to fly before me while I pursued your lovely form; and this phantom now and then seemed living, and rested on one of these fugitive footprints."

"It was there, in these long walks, that I learned to know you, to appreciate you—an admirable education, the mind of an angel, the dignity of a queen, with the grace of a nymph, thoughts worthy of Leibnitz clothed in the purest language, the bee of Plato on the lips of Diana—all these charms threw over me their magic, and I adored you. And during this time these well-beloved flowers blossomed about us. Listening to you, I inhaled their fragrance; their perfume was full of thoughts of you. But now they droop; they seem ready to die."

"Bah!" said the king, "it is a poor imitation of Jean Jacques. Why do you read me such stuff?"

"Because your majesty requested me to, for the sake of Mademoiselle d'Annebault's fine eyes."

"True enough; she has beautiful eyes."

"And when I return from these walks," read the marchioness, "I find my father alone in the grand drawing-room, leaning his head wearily on a lounge in the middle of the faded gilding which covers our worm-eaten wainscoting. He sees me enter sorrowfully; my

trouble makes him forget his own—Athenais! In the lower part of this room, near the window, is the harpsichord which your charming fingers have touched—those fingers on which once only my lips have pressed a kiss, while you were singing so sweetly that your song seemed a seraph's."

"How happy those composers are—Rameau, Lulli, Duni, and a host of others! Yes, you love their music; it lingers in your memory; its breath has passed over your lips. I seat myself near this harpsichord; I try to play one of the airs that you preferred. How cold and monotonous it seems! I let the sounds die away, and their echo loses itself in the arched roof. My father turns, and sees me unhappy; but what can he do? Idle gossip in the antechambers at court has imprisoned us in our château. He sees me young, ardent, full of life, asking only for a place of action in the world; he is my father, he adores me, and yet can do nothing."

"One would think," interrupted the king, "that this boy was just going into the chase, and that somebody had killed his falcon just as it was about to fly from his wrist. What ails the fellow?"

"It is true," read on the marchioness, "that we are near neighbors and distant relatives of the Abbé de Chauvelin."

"Ah! now we come to the root of the matter," said Louis XV., gaping. "Another nephew of these malcontents. My Parliament imposes upon my clemency. They all have such large families."

"But if this young man is only a distant relative?"

"No matter. This race is good for nothing. The Abbé de Chauvelin is a Jansenist. He is perhaps not bad at heart; but he has sent in his resignation. Throw the letter in the fire, and never let me hear of it again."

II.

THESE last words pronounced by the king were not exactly a death-warrant, but they were almost a prohibition to live.

What could a young man do without fortune in 1756, if the king would not hear his name mentioned? Try to be a clerk, or to become a philosopher, or a poet? but without patronage, and in this case this last business would be but a poor one.

But literature was not the vocation of the young chevalier of Vauvert, who had written, with tearful eyes, the letter of which the king made a jest.

At this very time, alone with his father in the old château of Neufllette, he was pacing up and down the room with a countenance at once sad and furious.

"I am going to Versailles!" he exclaimed.

"And what can you do there?"

"I do not know, I am sure. But what can I do here?"

"You can be my companion. That is not, perhaps, a very attractive prospect for you, and I would not keep you here, if you could go elsewhere. But have you forgotten that your mother is dead, and that I am alone in the world?"

"No, my dear father, nor do I forget that I promised her to devote myself to your happiness. I shall return, but I must go away for a time. I cannot remain here any longer."

"And why not?"

"Because I am in love—desperately in love with Mademoiselle D'Annebault."

"You know that your love is hopeless. It is only in romances that marriages are made without fortune. Do you remember that I am in disgrace at court?"

"Ah, sir, I remember it but too well, but in due respect, may I not ask why you should be in disgrace? We are neither of us members of Parliament. We pay the tax, we do not levy it. If the Parliament haggles about the king's revenues, that is their business, not ours. Why should the Abbé de Chauvelin involve us in his ruin?"

"The Abbé de Chauvelin acted like an honorable man. He refused to vote for the income-tax, because he is disgusted with the extravagances of the court. Nothing like it has been seen since the days of Madame de Chateaux. She was beautiful at least, and she did not cost the nation any thing, not even what she gave so generously. She was both mistress and sovereign, and she said she should be satisfied if the king did not send her into a dungeon, when he was tired of her. But this woman, this Le Normand, this insatiable monster!"

"What is it to us?"

"What is it to us, do you ask? More than you think. Do you know that while the king devours our substance, the fortune of his *griette* is incalculable? She made him give her at first one hundred and eighty thousand francs of income, but that was a mere nothing—it does not count at all now—you have no idea of the frightful sums she makes the king give her. There are not three months in the year, in which she does not cajole him out of five or six hundred thousand francs—now a tax on salt, now out of an increase on the perquisites of the superintendent of the stables. Besides the quarters which she occupies in all the royal residences, she buys La Selle, Cressy, Aulnay, Brinborion, Marigny, St. Remi, Bellevue, and a host of other landed estates, houses in Paris, Fontainebleau, Versailles, Compiègne, without mentioning large sums of money secretly placed in banking-houses in every country in Europe, in case of losing the king's favor, or of his death. And who pays for all this, if you please?"

"I do not know, but I am sure I don't."

"Indeed you do—pay your part—as does every man in France. The poor people pay for this, sweating blood and in tears—they cry out against her—they insult the statue of the king. And the Parliament are tired of all this, they are resolved to resist any new taxes. When money was needed for carrying on war, we were all ready with our last sou; then, no one thought of refusing to pay. The king, when he triumphed over his enemies, saw that his subjects adored him, and, when he was ill and nearly dying, he saw more clearly still that he had the hearts of his people. All faction, all party, all differences of opinion were forgotten. France fell on her knees by the king's bedside and prayed for him. But if we did pay without hesitation his soldiers and his doctors, we do not wish to pay his mistresses, and we have something else to do with our money than to keep Madame de Pompadour."

"I do not defend her, father. I cannot say whether she is right or wrong. I have never seen her."

"And, without doubt, you would like to see her, that you may form an opinion of her. At your age, the brain is influenced by the eyes. Try, then, if you choose; but this pleasure will be refused you."

"Why, sir?"

"Because it is vain to wish it. Because this marchioness is as invisible in her boudoir of Brinborion as the Grand Turk in his seraglio. Because you will find the doors shut in your face. What do you want to do? Attempt impossibilities? Seek your fortune like an adventurer?"

"No, like a lover. I do not intend to ask favors, but I will protest against injustice. I had well-founded hopes—almost a promise from Monsieur de Biron. I was on the eve of possessing the woman I love, and this love was a worthy one. You yourself approved of it. Let me, then, at least try to plead my own cause. Whether I shall do so before the king or Madame de Pompadour, I do not know, but I am going to court."

"You know nothing of the court, and yet you wish to go there!"

"Perhaps I shall be the more readily received there, for the very reason that I am unknown."

"You unknown! With your name and lineage! We are of the old nobility—we can never be unknown!"

"Very well, then the king will at least listen to my complaints."

"He will not even hear you speak one word. You think you will reach Versailles, when your postilion arrives there. Let me tell you, when you have passed the antechambers, the galleries, and are separated from the king simply by one door, that door will be an abyss. You cannot pass it. You will discover this, you will seek influence, protection, but you will not find it. We are relatives of Monsieur de Chauvelin, and how do you think the king will revenge himself for the abbé's contumacy? Exile for him as for the other members of Parliament, and for us a scornful word, or, worse, utter silence. Do you know what that is, the silence of the king, when with a disdainful glance, instead of speaking, he passes by you and annihilates you? Besides the Bastille and the scaffold, there is another sort of punishment which, less cruel in appearance, is equally fatal. The sentenced man, it is true, remains at liberty, but it is folly for him to dream of marriage, of a place at court, or in society, in camp, or in the church. Every avenue to place or preferment is closed before him, and he walks about apparently free, but really in

an invisible prison. This is what comes from losing the favor of the king."

"I will make such efforts that I will regain it."

"You will not succeed. The son of Monsieur de Meynières was as innocent as you are. He had, like you, promises and well-founded hopes of future success. His father, a loyal subject of the king, one of the best men in the kingdom, frowned upon by his majesty, went, the old gray-headed nobleman, not to beg, but to try to persuade the *griette* to plead for him. Do you know what she said to him? There are her own words, which Monsieur de Meynières has sent me in this letter: 'The king's master. He does not think best to visit his displeasure on you personally; he prefers to make you feel it, by depriving your son of any position. To punish you in any other way would involve publicity, which he does not wish. His will must be respected. I pity you, certainly. I can enter into your feelings. I have been a mother, and I know what it must cost you to see your son deprived of all opportunity to distinguish himself.' This is the style of that creature, and yet you would throw yourself at her feet."

"They say that her feet are charming ones, father."

"Zounds! yes. She is not pretty, and people say that the king does not love her. Yet he yields to her, he succumbs to this woman. To maintain her strange power, it must be that she depends on something besides her plain face."

"They say that she has a great deal of intellect."

"And no heart—a fine combination."

"No heart, when she can declaim with so much feeling the poetry of Voltaire, and sing with such expression the music of Rousseau! She, heartless, who can play 'Alzire' and 'Colette!' It is impossible; I will not believe it."

"Go, then, and see for yourself, if you choose. I do not prohibit your going, I only advise you; but, I tell you, your journey will be in vain. Do you love this Mademoiselle d'Annebault so very much?"

"More than my life."

"Then go, my son."

III.

It has been said that travelling weakens love, because of the new interests offered to the lover. It has been said also that travelling increases love, because of the opportunities it affords for reveries about the loved one. Our hero was too young to make such learned distinctions. Tired of the carriage, he exchanged it about half-way for a post-horse, and arrived, about five o'clock in the afternoon, at the Inn of the Sun, a name rather out of fashion since the days of Louis XIV.

There was, in Versailles, an old priest, who had once been a curate at Neauflette; the chevalier knew and loved him. This curate, quiet and poor, had a nephew, a favorite abbé at court, who might be useful to him. The chevalier went, therefore, to call upon the nephew, who, though a man conscious of his own importance, and in full clerical costume, nevertheless received the new-comer very kindly, and did not disdain to listen to what he had to ask.

"Luckily," said he, "you have come just at the right time. This evening there is a festival at the court, a sort of opera, or something, I hardly know what. I am not going, because I am *pouty* with the marchioness just now, in order to make her do something I want her to; but here is a ticket from the Duc d'Aumont, which I asked him to give me for somebody, I really have forgotten who. Never mind, you shall use it. You have not yet been presented, it is true, but, for a play, that is not necessary. Try to put yourself in the way of the king when he goes into the green-room. One favorable look from him, and your fortune is made."

The chevalier thanked the abbé, and, tired by his sleepless night and his horseback ride, he made a hasty toilet, such as suits people in love well enough. A servant, not particularly accustomed to such services, assisted him to dress as well as he could, and covered his spangled coat with powder in his zeal. He set out thus equipped to seek his fortune. He was only twenty years old, you see.

It was nightfall when he reached the palace. He went timidly toward the entrance, and asked the way of a sentinel. He showed him the grand staircase; there he learned, from the doorkeeper, that the opera had just commenced, and that the king, and of course everybody else, was in the grand saloon.

"If the marquis wishes to cross the court," added the servant, giving him this brevet title for want of a genuine one, "he will find

himself at the play in a moment. But perhaps the marquis prefers to go through the apartments."

The chevalier knew nothing of the palace, but curiosity led him to reply that he would go through the apartments; then, as a lackey approached to show him the way, an impulse of vanity made him add, that he did not need a guide. He went on, therefore, alone, but not without some palpitation of the heart.

Versailles was all ablaze with light. From the lower story to the uppermost one, the chandeliers, the girandoles, the gilded furniture, and the marble ornaments sparkled.

Throughout the palace, every door stood open, except those of the queen's private apartments. As the young man proceeded, he was struck with a wonder and admiration not easy to describe; for what made the spectacle most of all astonishing to him, was not merely its beauty and splendor, but the complete solitude in which he found himself. He seemed to be in an enchanted desert.

To be alone in a vast and grand building, whether it be a temple, cloister, or palace, does produce a strange and, I may say, a mysterious effect upon man. The edifice seems to weigh one down; the walls stare at him; the echoes listen to him; the noise of his footsteps seems an intrusive disturbance of the solemn silence, so that one feels a half-involuntary fear, and tries to walk noiselessly.

So our hero was at first impressed and subdued, but soon his curiosity gained the ascendancy, and banished all other emotions. The candelabras of the room of the mirrors shone with redoubled lustre. Thousands of loves, nymphs, and shepherdesses disported themselves on the ceiling, twining about the wainscoting, and wreathing themselves in one long garland about the entire palace.

Here were vast rooms decorated with hangings of velvet-and-gold, furnished in the stiff but elegant style of Louis XIV. There were ottomans and lounging-chairs scattered in disorder around gaming-tables; an infinite series of apartments entirely empty, but whose magnificence seemed the greater from the fact of their desertion. From time to time he came upon secret doors opening into silent corridors; a thousand staircases, a thousand passages, formed a seeming labyrinth; now he found himself among columns and platforms made for giants; now he passed into little boudoirs fit only for children's games of hide-and-seek; in one room he saw magnificent pictures of Van Loo hung near porphyry mantel-pieces, and, in another, articles of the toilet, puff-boxes, and the like, left carelessly in the keeping of fantastic Chinese images. It was a medley of solemn grandeur and of effeminate luxury, and everywhere, through all the splendor and the prodigal display, floated an atmosphere intoxicating and sweet, made up, as it seemed, of a thousand different odors, among which he fancied the perfumes of tropical plants and the sweet breath of women could be distinguished.

To be in such a place alone, in the midst of such marvels, at twenty years of age, was enough to bewilder any young fellow. The chevalier went on he knew not whither, as if in a dream. It seemed to him that one of the fairy tales of his boyhood, where some wandering prince finds an enchanted castle, was suddenly becoming real to him.

Could it be that mortals lived in this wonderful palace? Had actual women been seated in these arm-chairs, whose soft cushions yet retained the impress of the graceful forms which had leaned against them? Perhaps behind these thick curtains, or at the end of some long corridor, some princess might be found who had been sleeping for a hundred years, some fairy or some Armida might be hidden, or some hamadryad of the court might even slip away from the gilded ceiling or emerge from some marble column. Who could tell? Absorbed in spite of himself by these fancies, the chevalier sank upon a sofa to indulge himself in these dreams, and he might, perhaps, have forgotten himself entirely if it had not occurred to him very luckily that he was in love.

What was his lovely Mademoiselle d'Annebault doing, shut up in an old chateau all this time?

"My darling Athenais!" cried he, "why am I wasting the hours thus? Have I lost my reason? What strange spell has fallen upon me?"

He rose and proceeded across this new labyrinth, in which, it is hardly necessary to say, he soon lost himself.

He saw two or three servants talking together in a low voice at the end of a passage; he approached them, and asked the way to the theatre.

"If the marquis," said one, using the same title as the former servant had given him, "if the marquis will be so kind as to go down this staircase and take the first gallery at his right, he will find at the end of it three stairs which he must ascend; he must then turn to the left, and after crossing the Saloon of Diana, that of Apollo, the Muses, and that of Spring, he must go down again six stairs, and, leaving the guard-chamber on his right, go toward the staircase of the ministers, and he will meet there some guards who will show him the rest of the way."

"Much obliged," said the young man, "and with such plain directions it will be my own fault if I don't find my way."

He went on courageously, stopping once in a while involuntarily to look about him; at length, after a full quarter of an hour, as he had been told, he found more servants, and, on asking for fresh directions, was told—

"The marquis has made a mistake. He should have gone through the other wing of the palace; but it is very easy to retrace his steps; only go down this staircase again, go through the Saloon of the Nymphs, then pass the room of Summer, and—"

"I thank you," interrupted the young man. "I am a fool," he said to himself, "to be asking my way of every one I meet, like a booby. I gain nothing by it, for if they are not making game of me, which I half suspect, their pompous names of rooms and long-winded directions do not help me any."

He resolved, therefore, to go straight ahead, as far as he could, "for after all," said he, to himself, "fine, and grand and large as this palace is, it is not without limits, and, if it is three times as long as our hunting-park, I shall get to the end of it at last."

But it is not easy at Versailles to go for a long time straight ahead, and perhaps this rustic comparison of the royal residence displeased the guardian nymphs, for they began to puzzle our poor lover, and doubtless, in order to punish him, made him turn and twist so as always to retrace his own steps, and find himself every now and then in the same place; they utterly bewildered him in their labyrinth of marble and gold, till he felt like a rustic lost in a thicket.

In the Antiquities of Rome, there is a series of engravings by Piranesi, which the artist calls his dreams, and which are an attempt to describe his own visions during the delirium of a fever.

These engravings represent vast gothic halls. On the floors are all sorts of machines and engines, wheels, cables, levers, pulleys, catapults, etc., to express enormous power set in motion, and also formidable resistance. Beside the wall you see a staircase, and on this staircase climbing not without difficulty is Piranesi himself. Go up the stairway a little farther, and they stop short before a fearful chasm. Whatever may have been the fate of poor Piranesi, you fancy at least that his labors are at an end, but lift your eyes and you see a second staircase which lifts itself into the air, and up which poor Piranesi is still climbing, toward the brink of a second precipice. Look a little higher, and you will see still another staircase, up which poor Piranesi makes his eternal ascension, which again repeats itself till stairway and Piranesi are lost to sight in the clouds that form the border of the engraving.

This feverish allegory represents very distinctly the weariness of a useless toil, and the species of vertigo that such fruitless attempts cause. Our hero after repeated journeys from room to room, and from gallery to gallery, at last became enraged.

"Parbleu!" cried he, "this is unbearable, after being so charmed and so enthusiastic, to find myself alone in this cursed palace (it was no longer a glimpse into fairy-land), I find I cannot get out of it. Plague on the folly that induced me to enter here like Prince Charman with his magic boots of gold, instead of asking the first lackey I met to take me to the theatre!"

While giving vent to these tardy regrets, the chevalier was like Piranesi, half-way up a staircase on a broad landing where three doors opened.

Behind the middle one he heard a murmur so light and so pleasant that he paused to listen; at the instant that he stopped the folding-doors were thrown wide open; a puff of perfumed air, and a flood of light burst upon him, and so surprised him that he started back.

"Will the marquis go in?" asked the servant who had opened the door.

"I should like to go to the play," said the young man.

"It is just over, my lord."

At this moment many beautiful women, painted delicately in white

and red, and giving not their arm, not even their hand, but simply the tips of their fingers to their escorts, old or young gentlemen, began to come out of the theatre, taking great care to march sideways in order not to spoil their *paniers*. All this brilliant assemblage spoke in a low tone—merrily, to be sure, but with a sort of restraint.

"What is all this?" asked the chevalier, half divining what was about to happen.

"The king is about to pass," said the guardsman.

There is a certain sort of courage which is never shaken; it is the courage of ignorant people. Our young provincial, although ordinarily brave enough, did not possess this species of intrepidity; at the words "The king is coming," he stood motionless, almost helpless from excitement.

The King, Louis XV., who made nothing of riding on horseback a dozen leagues or more at one time, was, as every one knows, royally imperturbable. He boasted, not without reason, that he was the first gentleman in Europe, and his favorites said also, with truth, that he was the best-made and most elegant man of his time. Only to see him rise from his throne and walk a few steps, was a thing to be remembered. As he walked past his courtiers, with his arm resting on the shoulder of D'Argenson, while his red heels glided over the floor, a fashion of walking which he had introduced, all whispers ceased; the courtiers bowed their heads, hardly daring to salute their king, and the ladies, bending to the ground from the midst of their furbelows, made that coquettish obeisance which our grandmothers called "a reverence," but which has now been crowded out of fashion by the brutal "shake hands" of the English nation. But the king cared for nobody, and looked at only those whom it pleased him to notice.

Alfieri was perhaps present on this occasion; at any rate, in his memoirs, he gives this account of his presentation at Versailles:

"I knew that the king never spoke to foreigners unless they were very remarkable persons, but I was not prepared for the impassible and supercilious air of Louis XV. He surveyed a man from the crown of his head to the sole of his foot, and yet had the appearance of seeing nothing at all."

Yet it seems to me, if one said to a giant, "Here is an ant that I present to you," he would be likely to smile, or to say at least, "poor little insect!"

The taciturn monarch moved on amid flowers, beautiful women, and all his assembled court, preserving his solitude amid all that crowd. It did not take long for our young hero to understand that he had nothing to hope for from the king, and that the recital of his love-affairs would be utterly useless.

"I am an unhappy wretch!" he said to himself. "My father was right when he told me that at two steps from the king, I should yet find an abyss between him and me. If I should even venture to ask an audience of him, who would protect me? Who would present me. Behold him, the absolute monarch who with one word could change my destiny, secure me a fortune, give me all I most desire in life! Here he is, so near me that by stretching out my hand I could touch his garments, and yet, I feel farther from him than when I was at home in my native province. How could I approach him? How venture to speak to him?"

While the chevalier was absorbed in these sad reflections, he saw a young lady come in, whose beauty, grace, and archness attracted him in spite of himself. She was very simply dressed in white, without diamonds or laces, her only ornament being a natural rose in her hair. She was escorted by a gentleman perfumed and foppish as any court gallant could well be, and she talked with him in whispers behind her fan. Now as chance would have it, while talking, laughing, and gesticulating, this fan slipped from her hand, and fell under a chair exactly in front of our young chevalier; he sprang forward to pick it up, and, as, in getting it, he had been obliged to kneel, the young lady appeared so charming to him, that he presented it to her, still kneeling.

She paused, smiled, and passed on, thanking him only by a slight bow; but, at the glance she cast upon him, our poor youth felt his heart beat. And no wonder, for this young lady was no other than the "little nobody," as her discontented rivals called her, while others, speaking of Madame de Pompadour, called her "the marchioness," as one might say, "the queen."

[CONCLUSION NEXT WEEK.]

IDLING IN THE ORIENT.*

THE "Sentimental Idler" is a graceful writer and an agreeable companion. His pictures of the Orient have every character of an observing, philosophic, and dreamy wanderer. He would fain elevate the Idlers into an order, and he sets down rules for admission, that if always applied would certainly make his set the most agreeable of men. The Idler must be a gentleman, a man of education, a poet, and an artist; he must have good looks, gentle manners, and yet possess a Bohemian's love of vagrancy. "The winds in soft confidence whisper to us their secret pain; the landscapes show us their richest colors; the streams sing their sweetest music; the very flowers employ a rare speech, while the lowly among men disclose to our order their unappreciated but lovely lives. Beauty reveals herself in a thousand entrancing ways, and leads us step by step within the most sacred portals of Nature, by paths untrodden by less daring men."

An idle life in the Orient is one full of charms; it has every element of the picturesque, and if we glance through the pages of our traveller's narrative we shall find many a quaint experience, or strange adventure, or graphic description of places and people. The first portion of his narrative is of Constantinople, and he gives us this picture of

TURKISH LIFE.

In a Mohammedan household all the luxury is reserved for the harem. In the odalisks are kept the soft carpets, the brilliant rugs, the silken embroideries, the mirrors, the fountains, the polished woods; for here is lived the life of intimacy and secrecy into which not even a friend or relative can enter. Turkish life is sealed so completely, that it is not only difficult but nearly impossible to know what passes behind the finely-trellised windows, and for this reason and the absolute government of the Turks in their houses, I can readily believe those stories of terrible cruelties and crimes committed by the barbarous masters on wives and slaves; in fact, as an active criminal agent, poison is in frequent use, and I have heard Turks talk of the *strong coffee* with a cool and terrible emphasis. Talking to a Turk of his wife or the female members of his family is to commit the most gross impoliteness, and banished from the subject of social conversation are all those polite inquiries of "How is your wife's health?" etc. In fact, the wife of one of our ambassadors, in presenting some beautiful presents to one of the pachas, which of course were intended for the lady-members of his household, used words such as "Here are the stuffs which you know better than any one how to employ!" Therefore, it is one of the incongruities of this strange people, that, being the most barbarous, gross, and selfish, they yet can have their susceptibilities wounded more quickly than any other people in the world.

LOVE-INTRIGUES IN EGYPT.

An Egyptian girl or woman, concealed behind her *shu-bak* (window), sees pass a man who pleases her fancy. She calls, and, as the head of the unknown is raised, a flower, a note, or a handkerchief, is dropped at his feet. This is not yet a rendezvous, but an invitation to come again near the same place. At the moment the favored one leaves the spot, the door opens, and a eunuch or negress follows him. This servant is charged to know who he is, where he rests, what is his name, and condition in life.

The day after, in passing by the same house, if a flower, or other token, again falls from the same window, the lover knows that the report of the servant is made, and that his suit is favorably received.

"Now," adds Mahmoud (I translating into fairer English his odd expressions), "is the dangerous time. Sometimes at the café, sometimes in the street, you are met by an old woman, who tells you that such and such a man has a beautiful daughter, who wants to be married. She has the beauty of a princess, and all the charms that can tempt the imagination."

* Letters of a Sentimental Idler, from Greece, Turkey, Egypt, Nubia, and the Holy Land. By Harry Harewood Leech. New York: D. Appleton & Co.

"I wish to see her!" says the lover.

"Impossible," replies the old dame. "Gaze upon the beauty of a child of the faithful before marriage—Mohammed forbid!"

"I wish to see her," repeats the lover, unmoved, and he slips a piece of gold into the woman's hand.

"You shall behold the glory of her eyes," replies the woman, softened.

"No,—more," repeats the lover, and another backshish is pressed on the woman.

"You shall behold her rosy mouth, filled with teeth beautiful as the pearls on the sultana's neck."

"More!"

And, at the third gold-piece, the woman leaves the lover, saying, "You are a prince, and I am your slave!"

From that moment the interview is determined on.

The best occasion is generally that of the mosque or the baths. In the shadows of the former, at a proper moment, the girl will remove her veil, even so far as to expose her neck and shoulders, that is, if some jealous eunuch is far enough away. As to the bath—this is a thing more full of danger and coquetry. The master of the bath is nearly always in the intrigue. He has two *backshishes* to gain: one on the part of the woman, another from the lover. The eunuchs, or slaves, rest at the door of the bath. These immense halls have a cupola on high, pierced with a thousand little holes, each of which is supposed to be covered with glass; but the lover discovers that some are not thus closed, when he is led by the master to the roof of the building, where, if he be wise, he will be able to judge of the beauty of the woman he loves, as she rests in all the charming *négligé* of the bath-toilet.

FATTENING THE BRIDE.

I must not forget to note a curious preparatory operation. One month, often before the marriage, they commence to fatten the bride. This is done by farina, cooked almonds, fruits, butter-and-sugar confections, and every substance conducing to obesity: the standard of Arab beauty is contained in one word, *FAT*. Pending this time, the poor brides are given but little to drink, some drops of sugared water only being allowed, each day, by their hired fatteners. Among the poor, this operation is only followed for eight or nine days—it is expensive; and the bridegroom must be content with a more meagre wife.

A VILLAGE ON THE NILE.

I have just come aboard from a wilderness of crumbling mud huts almost buried amongst the palms—miserable hovels, with rude holes for doors, and twisted palm-mats for roofs; inside and out sit groups of women, whose faces though unveiled are tattooed with blue figures, and are horrible to look upon. In Egypt, as in more cultivated lands, you may take it as a rule that those who are most anxious to cover their faces are the old hags; and indeed the lot of woman is a lamentable one here, for while obliged to share the affections of her husband with others in this world, she is supposed to be put aside for the *houris* in the next. Indeed, many ulémas claim that women have no souls, and that their only chance of immortality rests on the tradition of Mohammed's conversation with the old woman who imported him for a place in Paradise.

"Vox me not," said the husband of Cadjah, "there can be no old women in Paradise—"

But when the ancient wife sent forth her lamentations, the diplomatic prophet added, "because the old will be all made young again!"

But I must not wander from descriptions of the village. Naked little children, almost all of them hopelessly afflicted with the ophthalmic curse, lay in dust-heaps in front of their cabins; the larger ones were playing at *koora* with stones and crooked sticks, but they soon left this sport to join the old men who followed us with whines and prayers for backshish. The Traveller coolly shot his pigeons from the family stock in the centre of the town, which raised a clamor among the women, only to be allayed by a few copper plaisters. In a line along one of the less crooked avenues were people sitting in the dirt, exhibiting for sale eggs, brass and copper trinkets, gaudy handkerchiefs, beads, bread, and rice, and making a noise in bargaining and selling, like unto twenty flocks of geese. Proud-looking Bedouins, mounted on sleek mares, rode through the town, brandishing, with a sort of warrior air, their long spears. Women, probably the dancers or *almées* of the town, sat with fierce-looking men in front of the

cafés; they were dressed in scant blue-cotton gowns, but with legs and breasts bare; they wore head-dresses, arm, breast, and leg ornaments of silver and gold coins; generally they were tattooed, but their large, velvety eyes were gentle as those of animals, and soft and tender as the gazelle's.

AN EGYPTIAN DANCE ON THE NILE.

When the girls arose, the grace of their forms was visible; they had on their professional dress worn in the village, which consisted of a short embroidered jacket, fitting close, but open in front, exposing their bosoms, on which hung strings of glittering ornaments; long loose trousers of transparent silk, a thin sash of cashmere twisted around the loins, rather than the waist, and slippers of red morocco with upturned points, completed the costume. Their hair hung in long braids down their backs, and hundreds of small gold coins were twisted in it, and sparkled as well in glittering circlets over brows, as around necks and arms. Their eyelids were delicately painted with *kohol* so as to make them almond-shaped and—languishing; and they advanced to the centre of the boat with a certain symmetry that was in harmony with the music. As they took their places, they threw off their slippers and commenced the movement, keeping time to the notes of the reed-pipe, and accompanying it with the clapping of castanets which were fastened to the thumb and fore-finger of each hand. There were three of them young and beautiful; the others were hideous, with rat's eyes, flaccid cheeks, and tattooed chins, so I contented myself with watching the most agreeable. They danced in groups of two or four, and then agitating their copper cymbals around and above their heads, they advanced right and left, circling, curving, and retreating, until a sort of prelude was finished, when joining the orchestra, who set up a dismal, melancholy song, they began a movement of the body almost impossible to describe. Their limbs seemed to be seized with a trembling, but they moved not from their position, while the upper parts of the body swayed and turned in a sort of dancing trepidation, becoming more and more agitated in time to the music and wild singing; and their breasts feigned with immodesty the most sensual physical emotions, until they seemed almost to exhaust themselves in an audacious ecstasy.

The delight of following the Idler through the lands where boundless fertility and eternal sunshine or starlight invite to indolence and repose is only second to his own. Then we escape the beggars and the Arabs and the fleas, which he did not escape, and we discover with him that in the idliest travel there is much to see and to know. Peculiarly is this so as we are propelled by sails and oars up the Nile, which is sometimes a calm lake, and again a rushing torrent; and where the slaves of to-day toil, as did Israel in their bondage, beneath the shadows of those grand temples which, perhaps, the children of Israel helped to build. Finally, the oars and the sails carry the Idler and his companions beyond the fertile valley which is yearly baptized by the soil-laden torrents from the lakes of the Mountains of the Moon, and they glide between the sandy deserts and the palms where once the kingdom of Nubia formed a part of Egypt's double crown. At last Egypt recedes from view, and they are nearing Ethiopia.

THE FIRST CATARACT.

The river narrowed between the black crags, and the water boiled in the curving channels. Sometimes a rocky pyramid uprose from the shining desert plain; sometimes our sight was shut out from the barren hills by some spot of vivid verdure, shadowed by acacias, palms, or sycamores; at other moments the sloping, sandy hollows were of deep gold, and seemed to be held in the crucible of rocks, whose volcanic origin caused the latter to shine like polished copper in the sun; sometimes the wastes of sand were white, and looked like snowy tracts lying under the moon. Past all these kaleidoscopic changes, we entered upon the seething waters, and, resting at the foot of the first fall, which the natives call the "Little Door," we beheld a sight so strange that my pen can but imperfectly depict it to you.

As far as the eye could reach, on every brown jagged rock, amid the boiling waters, and along the distant winding shore, uprose, as if by magic, hundreds of naked natives, of all ages and sizes, who, having evidently waited for our appearance, now joined in the work of fastening strong hawsers to our dahabéeh, accompanying their labor

by songs, shouts, and curses, and making a confusion which he only who has travelled in the Orient can understand. Scores of men and boys dashed into the foaming torrent, some on little round logs, and some without, all beating the waves with their feeble arms. They somehow contrived to steer themselves through the foamy cataract and reach our boat, on which they clambered, dripping, grinning, and naked, shouting "Backshish! backshish!"

I beheld, with amazement, one after another of these Nubians spring into the flood, shoot down the rapids as if it was only sport to them, and, paddling with either hand, reach any given rock. Many trust themselves without their log, and they apparently stand upright in the waters which whirl them past as on the back of some mad foaming charger; these fellows fasten their only garment (the waist-band or girdle) on their heads, in the form of a turban, when they go into "*El-Bab*," or the smaller cataracts, and then they seemed to me like great black painted idols, which, in the crash of the world's millennium, were being hurried on by some Scamander to join the Sphinxes in a strange inferno. What forms they had! As they came on deck dripping with water, and their skins shining like some dark polished metal, each would have been a worthy model for the sculptor. But I had no time to notice further these strange beings, for our good *Bund* had recoiled at the foot of a fall, and the ropes were brought in play to pull her up and over it; the foam was flung over her bows as she was dragged through the waters, and if, for an instant, the ropes had given way, we would have been dashed into splinters against the rocks in the flood. "*Wallah! wallah!*" "*Fallough, fallough!*" shouted the chiefs on the tops of the rocks, and the dark surging masses of Nubians, on each side, answered in chorus, "*Haylee adh!*" (God help!) Now we were below a ridge, over which it seemed impossible to drag our large boat; the waters were heaped up over it, as upon a cataract's brink, for a final plunge, and our craft trembled, but moved not over it: every nerve was strained; the hawsers were twisted around the rocks ahead of us, but we gained not an inch; the shouts of the unearthly figures around us, the wild motions and shrieks of the two rôis' of the cataracts, with the roar of the waters, made up a scene of savage strangeness impossible to depict. Just at this critical juncture, and at a point where a dahabééh had been wrecked two years before, our left bow-hawser gave way from the rocks (having been too quickly and insecurely fastened by the men), and, like a shot, we veered round, the waters dashed over our deck, and we only hung trembling by our *one* rope: if that had gone, we should have been precipitated against the rocks. The shouts of the natives were deafening; the gestures of the chiefs frantic—fifty athletes dashed into the cataract and swam for the missing rope, and finally, one old man brought forth the end in his teeth like a great grizzly dog—it was soon again fastened, and we were safe. Another pull, "*Haylee adh, haylee adh!*" and we felt ourselves slowly ascending the steep, though sights and sounds were overwhelmed by the rush of waters which sparkled over and thundered around us. One minute more—painful suspense—sustained struggle—and we were over, and tied to the rocks in the minor falls.

THE MAN WHO LAUGHS;*

OR,

BY THE KING'S COMMAND.

BY VICTOR HUGO.

BOOK II.—GWYNPLAINE AND DEA.

I.

A SIGHT OF THE MAN'S FACE, WHOSE ACTIONS ONLY HAVE BEEN SEEN HITHERTO.

NATURE had been prodigal in her gifts to Gwynplaine. She had given him a mouth stretching from ear to ear, ears coming forward upon his eyes, a shapeless nose adjusted for balancing the spectacles of a grimace-maker, and a countenance that you could not look at without laughing.

We have said that Nature had showered her gifts upon Gwynplaine. But was it Nature?

Had she not been aided?

A pair of eyes shining apparently with a borrowed light, a vacuum for a mouth, a snubbed protuberance with two holes that were nostrils, a squashed mass by way of face, and all this producing a joyous effect—it is certain that Nature, of herself, cannot produce such masterpieces.

Only, are laughing and joy synonymous?

If, in presence of this buffoon—for a buffoon he was—you let your first hilarious impression pass off, and observed the man closely, you would recognize in him the trace of art. Such a phiz is not accidental, but designed. It is not in Nature to be perfect to this point. Man can add nothing to his beauty, but every thing to his ugliness. You can't make a Roman profile, out of a Hottentot profile; but out of a Greek nose you can make a Calmuck nose. It was not unadvisedly that the low Latin of the middle ages invented the verb *denasare*. In Gwynplaine's childhood, had he been an object of so much attention, that some one was interested in him to the extent of modifying his visage? Why not, were it only for purposes of exhibition and speculation? According to all appearance, certain laborious handlers of children had been working upon his countenance. It seemed evident that a mysterious and probably hidden science, which bore to surgery the relations of alchemy to chemistry, had chiselled this flesh, certainly at a very early age, and made up, with premeditation, this physiognomy. This science—skilled in quarterings, in obtusions, and in ligatures—had slit the mouth, sundered the lips, laid bare the gums, distended the ears, jumbled together the cartilages, misshaped the eyebrows and the cheeks, enlarged the zygomatic muscle, smoothed over (as with a stomp in drawing) the seams and scars, brought back the skin over the lesions, while keeping the surface agape—and, from this valid and deep sculpturing, had come forth the mask, Gwynplaine.

No one is born thus.

At any rate, Gwynplaine was a perfect success. Gwynplaine was a boon conferred by Providence upon the sadness of man. By what Providence? Is there a Demon Providence, as there is a God Providence? We suggest the question, but do not attempt to answer it.

Gwynplaine was a mountebank. He exhibited himself in public. None other could approach him, for effect. He cured hypochondriacs by simply showing himself. People in mourning kept out of his way, discomposed as they were and forced into indecent laughter, if they caught sight of him. One day, the executioner came, and Gwynplaine made him laugh. You saw Gwynplaine, and you held your sides; he spoke, and you held your sides; he spoke again, and you fell down in a fit of laughter. He was the antipodes of chagrin. Spleen was one extreme; Gwynplaine the other.

Thus, at fairs and in public places, he had rapidly achieved the very desirable renown of a man-monster.

It was in laughing that Gwynplaine made others laugh. And, nevertheless, he did not laugh himself. His face laughed—not his fancy. The exceptional sort of visage, that chance or a quaintly special calling had fashioned, was all that laughed. Gwynplaine had nothing to do with it. What was without was not dependent on what was within. This laugh—that he had not himself imprinted on his forehead, on his cheeks, on his eyebrows, on his mouth—he could not remove from them. An everlasting laugh had been stamped upon his countenance. It was a compulsory laugh, and so much the more irresistible, that it was petrified. No one could sneak away from this grin. Two movements of the mouth are catching—the laugh and the yawn. By virtue of the mysterious operation, probably undergone by Gwynplaine in childhood, every portion of his face contributed to this grin; all his physiognomy tended thitherward, as the spokes of a wheel toward the hub; all his emotions, of whatever kind, augmented—or, we should better say, aggravated—this uncouth semblance of gayety. A surprise coming upon him, a pain felt by him, anger taking hold

* Entered, according to Act of Congress, in the year 1869, by D. APPLETON & Co., in the Clerk's Office of the District Court of the United States for the Southern District of New York.

of him, a sense of pity that he might have experienced, would but have increased this hilarity of the muscles. If he had cried, he would have laughed; and whatsoever Gwynplaine did, whatsoever he desired, whatsoever he thought, so soon as he raised his head, the crowd, if crowd there were, had before its eyes this apparition—a convulsive burst of laughing.

Figure to yourself a Medusa's head—jocund!

All that might be on the mind was put to rout by this unexpected air; you must needs laugh.

Ancient art was wont to display, upon the front of theatres, a face in brass, joyous. This face was called Comedy! The bronze seemed to laugh, and provoked laughter, and was pensive. All the caricature that leads up to madness, all the irony that leads up to wisdom, were condensed and amalgamated in this visage. The aggregate of cares, of disillusion, of disgusts, and of sorrows, stamped itself upon the impassible forehead, and gave forth that lugubrious total—mirth. One corner of the mouth was drawn up, on the human side, by mockery; the other corner, on the divine side, by blasphemy. Men confronted, in this model of ideal sarcasm, the ironical mirror that every one has within himself; and the crowd, renewed unceasingly around this persistent laugh, was charmed with the sepulchral immobility of the giggle. Of this sombre dead mask of antique comedy, adjusted to a living man, it might almost be said that it was Gwynplaine. On his neck he bore the same infernal head of unputting hilarity.—An eternal laugh—what a burden for the shoulders of a man!

An eternal laugh! Let us understand each other, and explain. According to the Manichæans, the absolute yields at intervals, and Divinity itself is not without intermission. Let us be explicit, also, touching the will. We do not admit that it can ever be entirely powerless. All existence resembles a letter, which the postscript modifies. For Gwynplaine the postscript was herein: by force of will, and in concentrating all his mind, and on condition that no emotion intervened to distract him and unbend the fixity of his effort, he could succeed in suspending the eternal grin upon his face, and in throwing over it a sort of tragic veil. Then there was no more laughing before him; men shuddered.

Let us add that Gwynplaine scarcely ever made this effort, for the fatigue of it was painful and the tension hard to bear. Besides, it was sufficient that there should be the least distraction or the least emotion, for the laugh—chased away for a moment—to reappear, irresistible as the tidal reflux, upon his face; and so much the more intense was it, as the emotion had been powerful, be it what it might.

With this restriction, Gwynplaine's laugh was eternal.

People saw Gwynplaine; they laughed. When they had laughed, they turned away their heads. The women, above all, were horror-struck. The man was frightful. The jocose convulsion was, as it were, a tribute paid; it was joyously undergone, but almost mechanically. After which—the laugh once chilled—it was intolerable for a woman to see Gwynplaine, impossible to study him.

Beyond this, he was tall, well made, agile, and in no way deformed save in countenance. This was an indication, furthermore added to the presumption that there was to be seen, in Gwynplaine, rather a creation of art than a work of Nature. Gwynplaine, handsome in figure, had probably been handsome in face. At birth, he must have been like any other baby. They had kept the body intact, and had only touched up the face.

Such, at least, was the probability of the case.

They had left him his teeth. The teeth are requisite in laughing. The death's-head keeps them.

The operation performed upon him must have been fearful. He had no recollection of it, which was no proof that he had not undergone it. This surgical sculpture could only succeed upon a child very young, and, in consequence, having little cognizance of what happened to it, and easily capable of mis-

taking a wound for a sore. Besides, in those days, be it remembered, means for putting the patient to sleep, and for suppressing pain, were known. Only, at that period, they were called magic. Nowadays they are called anæsthesia.

In addition to this physiognomy, those who brought him up had provided him with the accomplishments of the gymnast and the athlete. His joints, usefully dislocated, and adapted for bendings backward, had received the clown's training, and could, like the hinges of a door, move themselves in either direction. In fitting him for the mountebank's trade, nothing had been neglected.

His hair had been dyed with ochre, once for all—a secret rediscovered in our own day. Pretty women use it now; what disfigured in former times is now thought to embellish. Gwynplaine had yellow hair. This hair-dye, corrosive, apparently, had left it woolly and awry. These tawny bristles, more like a mane than a head of hair, covered and hid a lofty skull, made for purposes of thought. The operation, such as it was, that had taken away all harmony from the countenance, and thrown all this flesh into disorder, had laid no hold upon the bony lid. Gwynplaine's facial angle was surprisingly marked with power. Behind the laugh there was a soul, that dreamed, as we all dream.

For the rest, this laugh was, for Gwynplaine, a definite talent. He could not control it at all; but he derived advantage from it. By means of this laugh he gained his livelihood.

Gwynplaine—as you have, without doubt, already perceived—was that child abandoned, one winter's evening, upon the coast of Portland, and sheltered at Weymouth, in a poor hut upon wheels.

II.

DEA.

The child was now a man. Fifteen years had slipped away. It was 1705. Gwynplaine was twenty-five.

Ursus had kept with him the two children. This had constituted a nomad group.

Ursus and Homo had grown old. Ursus had become entirely bald. The wolf had become gray. The age of wolves is not determined like that of dogs. According to Molin, there are wolves that live eighty years: among others, the small Koupara, *cavia vorax*, and the strong-smelling wolf, *canis nubilus* of Say.

The little girl found upon the dead woman was now a tall personage of sixteen, pale, with brown hair, slight, frail, almost tremulous by reason of delicateness, and causing fear lest one should dismember her, beautiful exceedingly, with eyes full of light, blind.

The fatal winter's night, that had cast down upon the snow the beggar-woman and her child, had dealt a double stroke. It had killed the mother and blinded the daughter.

Amaurosis had forever paralyzed the eyeballs of this girl, in her turn become a woman. In her countenance, across which the light reached her not, the corners of the lips sorrowfully turned downward were expressive of this bitter disappointment. Her eyes, large and clear, were strange in this respect—quenched for herself, they were brilliant for others. Mysterious torches, illumining only what was without. She gave forth light, she who had it not. Those eyes, effaced, were resplendent. Captive of darkness, she whitened the gloomy circle around her. From the depth of her incurable eclipse, from behind the black wall that we term blindness, she jetted forth radiance. She saw not the sun outside of her; and you could see, in her, her soul.

Her dead look had a celestial intensity, that is indescribable.

She was the night; and, from this remediless shade amalgamated with herself, she came out, a star.

Ursus, crazy about Latin names, had christened her *Dea*. He had in some degree consulted his wolf. He had said to Homo—You represent man: I represent the beast. We are the

world below; this little one shall represent the world on high. Such weakness is omnipotence. In this fashion, the universe complete, humanity, bestiality, divinity, will be in our hut.—The wolf had made no objection.

And thus it was that the foundling was called Dea.

As for Gwynplaine, Ursus had no trouble in inventing a name for him. On the very morning of the day, when he had ascertained the little boy's disfigurement and the little girl's blindness, he had asked:—Boy, what's your name? And the lad had replied,—They call me Gwynplaine.

—Gwynplaine let it be! Ursus had said.

Dea assisted Gwynplaine in his exercises.

If human misery could be summed up, it might have been in Gwynplaine and Dea. They seemed to have been born, each in a compartment of the sepulchre; Gwynplaine in the horrible, Dea in the obscure. There was for Gwynplaine, who could see, a harrowing possibility, that had no existence for Dea, being blind: that of comparing himself with other men. Now, in a position like that of Gwynplaine—admitting that he sought to take account of it—to compare himself was no longer to understand himself. To have, like Dea, a void look, whence the world is absent, is a supreme affliction; less, however, than this: to be an enigma to one's own self; to feel also that something is absent, which is one's self; to see the universe, and not to see one's self. Dea had a veil—the darkness; Gwynplaine had a mask—his face. Circumstance unspeakable: it was with his own flesh that Gwynplaine was masked! What his countenance was, he knew not. His face was in a swoon. They had put upon him his mock self. For visage, he had a spiriting-away. The head lived, and the visage was dead. He did not remember to have seen it. The human race, for Dea as for Gwynplaine, was a fact out of themselves; they were far from it. She was alone, he was alone; the isolation of Dea was funeral—she saw nothing; the isolation of Gwynplaine was sinister—he saw every thing. For Dea, creation passed not the bounds of hearing and touch; her real was narrow, limited, short, lost all at once; her only infinite was darkness. For Gwynplaine, to live was to have the crowd forever before him, and forever beyond his reach. Dea was proscribed from light; Gwynplaine was banished from life. The two, unquestionably, might abandon themselves over to despair. The depth of possible calamity was touched. They were in it, he and she alike. An observer, who had seen them, might have felt his musing resolve itself into measureless pity. What must they not suffer! A decree of ill weighed visibly upon these two human creatures; and never had fatality better laid out a destiny of torture and a life of hell, for two beings who had nothing done.

They were in a paradise.

They loved each other.

Gwynplaine adored Dea. Dea idolized Gwynplaine.

—You are so handsome! said she to him.

III.

"OCULOS NON HABET, ET VIDET."

One single woman upon earth saw Gwynplaine. It was this blind one.

What Gwynplaine had been for her, she knew from Ursus, to whom Gwynplaine had told the story of his rude march from Portland to Weymouth, and of the agonies mixed up with his abandonment. She knew that, when quite a little baby, dying upon a dead mother, sucking at a corpse, a being, only somewhat less small than herself, had picked her up; that this being, stricken out, and, as it were, buried under the gloom of universal rejection, had heard her cry; that, all being deaf for him, he had not been deaf for her; that this child, isolated, feeble, cast out, with nothing to lean upon, dragging himself through the desert, worn out with fatigue, broken down, had accepted from the hands of night the burden of another child; that he, who had nothing to expect in the dubious distribu-

tion that is termed fate, had charged himself with a destiny; that, in destitution, in agony, in distress, he had constituted himself a providence; that, Heaven closing itself, he had opened his heart; that, being lost, he had saved; that, having no roof nor shelter, he had been a refuge; that he had made himself mother and nurse; that he, himself alone in the world, had replied to abandonment by an adoption; that in darkness he had set this example; that, not finding himself sufficiently weighed down, he had not objected to another's misery in addition; that upon this earth, whereon it seemed that there was nothing for him, he had fallen upon an object of duty; that there, where all might have hesitated, he had gone forward; that there, where all would have recoiled, he had consented; that he had put his hand into the sepulchre's mouth, and had drawn out her, Dea; that, half naked, he had given his rags, because she was cold; that, hungry, he had thought of making her drink and eat; that, for her so little, he, the little one, had combated death; that he had combated it under every form, under the form of winter and snow, under the form of solitude, under the form of terror, under the form of cold and hunger and thirst, under the form of tempest; that for her, Dea, this Titan of ten years had waged battle with the immensity of night. She knew that he had done this, being a child, and that now, being a man, he was her strength for her who was weak, her wealth for her who was poor, her cure for her who was sick, her eye for her who was blind. Through the dense unknown, by which she felt herself held at distance, she distinguished clearly this devotion, this self-sacrifice, this courage. Heroism, in the region of the immaterial, has a form. She caught this form sublime. She perceived the mysterious outlines of Virtue, within that inexpressible abstraction where dwells the mind unilluminated by the sun. Amid the surroundings of obscure objects set in motion, which was the only impression made upon her by reality—in that unquiet stagnation of the passive creature ever watchful against possible peril—in that sensation of being therein without defence, which is all the existence of the blind—she made out Gwynplaine above her, Gwynplaine never chilled, never absent, never eclipsed; Gwynplaine tender, helpful, gentle. Dea thrilled with this certainty and with gratitude. Her anxiety, reassured, tended to ecstasy; and, from her eyes surcharged with shadows, she contemplated at the zenith of her abyss this goodness, as it were immeasurable light.

In the ideal, goodness is the sun; and Gwynplaine dazzled Dea.

For the crowd—which has too many heads to have a thought, and too many eyes to have a look—for the crowd—which itself a surface, stops short at surfaces—Gwynplaine was a clown, a buffoon, a mountebank, a grotesque creature, a little more and a little less than an animal. The crowd knew nothing but his face.

For Dea, Gwynplaine was the saviour who had picked her up in the tomb, and brought her out thence, the consoler who had made existence possible for her, the liberator whose hand she felt in her own amid the labyrinth of darkness. Gwynplaine was the brother, the friend, the guide, the support, the semblance of one from above, the winged and radiant spouse. There, where the multitude saw a monster, she saw an angel.

The fact was, Dea, being blind, perceived his soul.

IV.

THE LOVERS PAIRED.

URSUS, philosopher, understood it. He approved of Dea's fascination.

He said:

—The blind one sees the invisible.

He said:

—Conscience is sight.

He looked at Gwynplaine, and muttered to himself:

— Half monster, but half god.

Gwynplaine, on his part, was infatuated with Dea. There is the invisible eye, the mind; and there is the visible eye, the eyeball. It was with the visible eye that he saw her. Dea was dazzled through the ideal; Gwynplaine, through the real. Gwynplaine was not ugly—he was hideous; he had before him his contrast. By as much as he was terrible, by so much was Dea charming. He was horror; she was grace. There was something of fancy in Dea. She seemed to be a dream partially embodied. There was in all her person, in her Æolian cast, in her delicate and supple figure, tremulous as a reed, in her shoulders perchance invisibly winged, in the discreet rounding of the forms that indicated her sex—though rather to the spirit than to the senses—in her pallor which was almost a transparency, in the solemn and serene introspection of her look divinely closed against earth, in the hallowed innocence of her smile—an exquisite approach to the angelic, while she was none the less sufficiently a woman.

Gwynplaine, as we have said, made comparisons, as regarded himself, and as regarded Dea. His existence, such as it was, was the result of a double and unwanted adoption. It was the intersecting point of two rays, one from below and one from above, one black, the other white. The same crumb perhaps, pecked at simultaneously by the respective beaks of good and evil, the one bringing with it a bite, the other a kiss. Gwynplaine was this crumb, an atom bruised and caressed. Gwynplaine was the issue of a fatality mixed up with a providence. Misfortune had laid a finger on him, and good fortune also. Two widely sundered destinies had made up his wayward lot. Anathema and benediction were upon him. He was the accursed and the elect. Who was he? He knew not. Looking at himself, he saw a stranger. But the stranger was a monstrosity. Gwynplaine lived in a state of decapitation, having a countenance that was not himself. This countenance was horrible, so horrible as to be amusing. It gave rise to so much fear, that it made one laugh. It was infernally ludicrous. It was the wreck of the human face in a bestial mask. Never had been seen upon the human visage a more total eclipse of man; never had parody been more perfect; never had outline more squalid sneered in a nightmare; never had all that could be repulsive to a woman been more hideously amalgamated in a man. The wretched heart, masked and calumniated by the face, seemed forever doomed to solitude beneath the visage, as beneath the lid of a tomb. And yet, not so! There, where some mysterious malice had exhausted itself, invisible beneficence in its turn had been lavish. In this poor down-fallen one, suddenly raised up, it inspired what is attractive, side by side with all that repels; amid dangers it planted a loving nature; it winged the flight of a soul toward the forsaken; it charged the dove to console the thunder-stricken; it caused deformity to be adored by beauty.

For this to be possible, need was that the fair one saw not the disfigured one. For this blessing, this misfortune was requisite. Providence had made Dea blind.

Vaguely did Gwynplaine perceive that he was the object of a redemption. Wherefore the persecution? He knew not. Wherefore the ransom? He knew not. A halo of glory had come and settled itself over the blight that was on him; this was all he knew. Ursus, when Gwynplaine was old enough to understand it, had read and explained to him the text of Doctor Conquest *De Denasatis*, and in another folio, *Hugo Plagon*,* the passage *nares habens mutilas*; but Ursus had prudently abstained from conjectures, and had specially guarded himself against conclusions of any sort. Suppositions were possible; the probability of violence having been done to Gwynplaine's infancy was glanced at; but, for Gwynplaine, there was only one thing in evidence, the result. His fate, it was to live under a brand imprinted. Why this brand? There was no

answer. Silence and solitude around Gwynplaine. All was shifting, in the conjectures that could be brought to bear upon this tragic reality; and nothing, save the terrible fact, was certain. In this extremity, Dea intervened; a sort of heavenly interposition between Gwynplaine and despair. Touched, and as it were rewarmed, he noted how the sweetness of this exquisite girl leaned toward his hideousness. A paradisiacal astonishment softened his Draconian face. Formed to appal, there was for him the marvellous exception of being admired and worshipped by light in its ideal; and, monster himself, he felt that a star was contemplating him.

Gwynplaine and Dea, they were a pair; and these two pathetic hearts adored each other. One nest, and two birds; there is their story. They had reentered into the universal law, which is to love, to seek, and to find.

In such manner, that hate had made a mistake. The persecutors of Gwynplaine, whoever they were—the enigmatical implacableness, come whence it might—had missed their aim. They had desired to make a man abandoned to despair; they had made one enraptured. They had affianced him in advance, to a grievous wound; they had predestined him to be consoled by an affliction. The executioner's pincers had been softly transformed into a woman's hand. Gwynplaine was horrible, artificially horrible, horrible by the hand of man. They had hoped to isolate him forever—from his family in the first place, if he had relations, and from humanity thereafter. A child, they had made of him a ruin; but Nature had reclaimed this ruin, as she reclaims all ruins; Nature had consoled this solitude, as she consoles all solitudes. Nature comes to the rescue of all that is renounced. There, where all is wanting, she rebestows herself in whole; she reflowers and covers again with verdure all that has fallen down; she has ivy for stones, and love for men.

Profound munificence of the shadowy!

V.

THE BLUE IN THE BLACK.

Thus, one by aid of the other, lived these hapless ones; Dea supported, Gwynplaine accepted.

This orphan woman had this orphan man. This fragile one had this deformed one.

These widowhoods espoused each other.

An ineffable thanksgiving grew out of these two afflictions. They thanked.

Whom?

The darksome Infinitude.

The mere act of acknowledgment suffices. Thanksgiving has wings, and penetrates where it ought to penetrate. Your prayer goes further lengths than you go.

How many men have thought that they were praying to Jupiter, and have prayed to Jehovah! How many believers in amulets have been heard by the Infinite! How many atheists fail to perceive that, by the sole fact of being good and sorrowful, they are praying to God!

Gwynplaine and Dea were grateful.

Deformity is expulsion. Blindness is a precipice. The expulsion was adopted; the precipice was habitable.

Gwynplaine saw coming down to him in full light—in an ordering of destiny that resembled the setting forth of a dream—a white cloud of beauty in woman's form, a radiant vision wherein was a heart; and this apparition, half cloud and woman notwithstanding, clasped him, and this vision embraced him, and this heart favored him. Gwynplaine, being loved, was no longer deformed. A rose asked a caterpillar in marriage, perceiving in this caterpillar the paragon butterfly. Gwynplaine, the rejected one, was chosen.

To have what is essential—that is every thing. Gwynplaine had his; Dea had hers. The abjectness of the disfigured one, alleviated and as it were made sublime, dilated itself in exal-

* Versio Gallica, Will. Tyrus, lib. 2, chap. 22.

tation, in ecstasy, in faith. The sombre hesitation of the blind one in her darkness was met by an outstretched hand.

It was the entry of two miseries into the ideal, this one absorbing that one. Two excluded ones gave each other admission. Two voids combined to fill each other up. They laid hold of that which was wanting. Where one was poor, therein the other was rich. The misfortune of one made the other's treasure. If Dea had not been blind, would she have chosen Gwynplaine? If Gwynplaine had not been disfigured, would he have preferred Dea? She would probably have liked deformity no better than he would have liked infirmity. What happiness for Dea, that Gwynplaine was hideous! What luck for Gwynplaine, that Dea was blind! Outside of their providential watching each other, there was impossibility between them. A prodigious need, one of the other, was the basis of their love. Gwynplaine saved Dea; Dea saved Gwynplaine. A meeting of afflictions, resulting in adherence! The embrace of the engulfed in the abyss! Nothing more contracted, nothing more desperate, nothing more exquisite!

Gwynplaine had one thought:

—What should I be, without her?

Dea had one thought:

—What should I be, without him?

These two banishments led up to one country; these two incurable fatalities—the brand upon Gwynplaine, and Dea's blindness—effected their junction in contentment. They were all in all to each other; they imagined nothing beyond themselves. To converse together was a delight; to draw near each other was bliss. By force of mutual intuition, they had reached a unity of ideas; they two thought the same thought. When Gwynplaine walked, Dea imagined that she heard a step in an apotheosis. They leaned one against the other in a sort of sidereal twilight, full of perfume, of glimmerings, of music, of luminous architecture, of dreams. They belonged each to the other. They felt that they were united forever, in the same joy and in the same rapture. Nothing so strange as this construction of an Eden by two of the condemned.

They were inexpressibly happy.

Out of their hell they had made a heaven. Such, O Love, is thy power!

Dea heard Gwynplaine laugh; and Gwynplaine saw Dea smile.

Thus an ideal felicity was found; the perfect joy of life was realized; the vague problem of happiness was solved. And by whom? By two poor wretches.

For Gwynplaine, Dea was the "splendor." For Dea, Gwynplaine was the "presence."

The presence, profound mystery, which makes the invisible divine, and whence results that other mystery, faith. In religions, there is this only of irreducible. But this irreducible suffices. One sees not the great being essential to our existence; one feels it.

Gwynplaine was Dea's religion.

Sometimes, distracted with love, she threw herself on her knees before him, as it were a fair priestess adoring the full-blown gnome of a pagoda.

Picture to yourself the bottomless pit, and in the midst of it an oasis of brilliancy, and in this oasis these two beings, beyond this life, bedazzling each other.

No purity comparable to that of these love-passages. Dea knew not what a kiss was, albeit perhaps she desired it, for blindness, especially in a woman, has its fancies, and, though trembling at the approaches of the unknown, does not shrink from them all. As for Gwynplaine, the emotions of youth made him pensive. The more he felt himself fascinated, the more timid was he. He might have ventured to any lengths with this companion of his early years; with her who was as unfamiliar with sin as with light; but he would have thought himself to be stealing what she might have given. He resigned himself, with complacent melancholy, to loving in angelic

fashion, and the sense of his deformity resolved itself into dignified bashfulness.

Such was this idyl, growing out of a tragedy.

VI.

URSUS TUTOR, AND URSUS GUARDIAN.

Ursus had been, for Gwynplaine and Dea, almost a father and a mother. Murmuring all the time, he had reared them; scolding all the time, he had nourished them. This adoption having made the hut upon wheels heavier, he had been obliged to harness himself more frequently with Homo, to drag it.

Let us add that, after the first few years, when Gwynplaine was almost grown up and Ursus was quite old, it had been Gwynplaine's turn to drag Ursus.

Ursus, seeing Gwynplaine grow bigger, had cast the horoscope of his deformity.—They have made your fortune! was his remark.

This family, of an old man, two children, and a wolf, had become—with all their prowling about—a group more and more closely bound together.

The wandering life had not prevented education. To wander is to thrive, said Ursus. Gwynplaine was evidently made to be exhibited at fairs. Ursus had cultivated in him the mountebank; and in this mountebank, to the best of his ability, he had incrustated learning and wisdom. Ursus, arrested before the dumb-foundering mask of Gwynplaine, muttered: "A good beginning has been made of him." That is why he had finished him off with all the ornaments of philosophy and knowledge.

Often did he repeat to Gwynplaine—Be a philosopher! To be wise is to be invulnerable. Such as you see me, I have never wept. Strength of my wisdom. Do you think, if I had desired to weep, that I should have lacked an occasion?

Ursus, in his monologues, whereto the wolf was a listener, remarked:—I have taught Gwynplaine every thing, Latin included, and Dea nothing, including music. He had taught them both to sing. He had himself a pretty talent upon the wheaten pipe, a tiny flute of that day. He played it agreeably enough, as also the *chiffonie*, a mendicant's hurdy-gurdy, which the chronicle of Bertrand Duguesclin terms, "instrument Fuand," and which is the starting-point of symphony. This music attracted the populace. Ursus showed the *chiffonie* to the crowd, and said:—In Latin, *organistrum*.

He had taught Dea and Gwynplaine singing, according to the method of Orpheus and of Egide Binchois. It occurred more than once that he cut short his lessons, with this cry of enthusiasm: Orpheus, musician of Greece! Binchois, musician of Picardy!

These complications of a careful education had not so far occupied the two children as to hinder them from adoring each other. They had grown up, commingling their hearts, just as two saplings planted near together, in becoming trees, mingle their branches.

—It's all the same, murmured Ursus; I'll marry them.

And he grumbled aside:

—They bore me with their love.

The past—the small portion that was theirs at least—had no existence for Gwynplaine and Dea. They knew, concerning it, just what Ursus had told them. They called Ursus, "Father."

Gwynplaine had no remembrance of his childhood, but as of the passing of demons over his cradle. He had an impression of it, as of having been stamped upon, in darkness, by deformed feet. Was this done purposely, or involuntarily? He did not know. What he recalled clearly, and in its every detail, was the tragic adventure of his abandonment. The godsend of Dea made for him, out of that terrible night, a radiant point of time.

Dea's recollections were still more obscure than Gwynplaine's. Having been so young, all had passed away. She recalled her mother as something cold. Had she ever seen

the sun? Perhaps. She tried hard to replunge her mind into the swoon that was behind her. The sun? What was it? She remembered an indescribable something, luminous and warm, that had been replaced by Gwynplaine.

They conversed in low tones. Certain is it that to coo is the most important thing in the world. Dea said to Gwynplaine:—The light, it is when you are speaking.

VII.

BLINDNESS GIVES LESSONS IN CLAIRVOYANCE.

At times, Gwynplaine reproached himself. He made of his happiness an affair of conscience. He fancied that to let himself be loved by this woman, who could not see him, was to deceive her. What would she say, if her eyes were suddenly opened? How would she be repelled, by what now attracts her! How would she recoil before so horrible a lover! What a shriek! What hands covering her face! What a plight! A harassing scruple tormented him. He said to himself that he, a monster, had no right to appropriate love. Hydra, worshipped by a star, it was his duty to enlighten this blinded luminary.

Once he said to Dea:

—You know that I am very ugly?

—I know that you are sublime, was her reply.

He continued:

—When you hear everybody laughing, it is at me that they laugh, and because I am a horrible object.

—I love you, said Dea.

After a pause, she added:

—I was in death; you brought me back into life. With you there, heaven is at my side. Give me your hand, that I may touch Divinity.

Their hands sought and clasped each other; and they said never more a word, rendered silent by the plenitude of loving.

The crabbed Ursus had overheard them. The next day, when they were all three together, he said:

—Besides, Dea is ugly also.

The words failed in their effect. Dea and Gwynplaine were not listening. Absorbed in each other, they seldom paid attention to Ursus's apothegms. Ursus was profound, and at a dead loss.

This time, however, the warning of Ursus, "Dea is ugly also," indicated in that learned man a certain knowledge of woman. Gwynplaine, without doubt, had committed, in all loyalty, an act of imprudence. Said to a very different woman, and to a very different blind person from Dea, the expression "I am ugly," might have been dangerous. To be blind, and to be in love, is to be doubly blind. In that situation, one dreams. Illusion is the nourishment of dreams; to deprive love of illusion is to take away the food on which it lives. All enthusiasm enters, usefully, into its formation; physical, no less than moral, admiration. Furthermore, one should never, with a woman, use an expression difficult to understand. She dreams over it; and often she dreams ill. An enigma in a dream makes havoc. The percussion of a word, that is let fall, disintegrates what adheres. It happens sometimes that, one knows not how, because it has received the chance-shock of a casual word, a heart becomes void insensibly. The being, who loves, is conscious of a diminution in his bliss. Nothing is to be feared so much as this slow trickling out from a cracked vase.

Fortunately, Dea was not of this clay. The stuff for making womankind in general had not served for her. A rare nature was Dea. The body was fragile; the heart not. What was at the very root of her being, was a divine perseverance in love.

All the mischief, wrought upon her by Gwynplaine's expression, led to making her say to him, one day, these words:

—To be ugly, what is that? It is to do evil. Gwynplaine does nothing but good. He is handsome.

Then, always under that form of interrogation familiar to childhood and blind people, she went on:

—To see? What do you call seeing, you others? I do not see, I; I know. It seems that to see means to conceal.

—How do you mean? asked Gwynplaine.

Dea answered:

—To see is something that hides the truth.

—No! said Gwynplaine.

—Yes, I tell you, replied Dea, since you tell me that you are ugly!

She thought a moment, and added: Liar!

And Gwynplaine had the dear delight of having avowed, and of not being believed. His conscience was at ease; his love also.

Thus had they reached, she sixteen years, he twenty-five.

They were not, as one would say now, more advanced than in the first day.

Their caresses went not much beyond hands pressed.

Twenty-five years, and sixteen! This brought it about that, one morning, Ursus, not losing sight of his "bad turn," said to them:

—One of these days you will choose a religion.

—For what purpose? asked Gwynplaine.

—To be married by.

—But that's done, replied Dea.

Dea did not understand how they could be husband and wife, more than they were.

In the main, this chimerical and virginal contentedness, this ingenuous satiating of soul by soul, this celibacy, taken for marriage, was not displeasing to Ursus. What he said of it was said, because he was bound to say something. But the physician within him found Dea, if not too young, at least too delicate and too frail for what he termed "hymen in the flesh and bone."

That would always come soon enough.

Besides, were they not married? If the indissoluble exist anywhere, was it not in this cohesion, Gwynplaine and Dea? Rare circumstance, they were adorably cast into each other's arms by misfortune! And as though this first bond were not sufficient, love had come to attach itself to misfortune, to be enveloped in it, to be closely bound to it. What force could ever break the iron chain, made firmer by the knot of flowers!

There, in truth, must be the inseparables.

Dea had beauty, Gwynplaine had sight. Each brought a dowry; and they made more than a couple—they made a pair, kept apart only by innocence; a sacred interposition.

Nevertheless, it was in vain that Gwynplaine went on dreaming, and absorbed himself so far as he could in contemplation of Dea, and in the spiritual tribunal of his love; he was man. There is no eluding the laws of fatality. He underwent, as does Nature throughout all her immensity, the secret workings ordained by the Creator. This, at times when he appeared in public, made him eye the women who were in the crowd; but he turned away immediately this untoward look, and hastened to reënter, repentant, into his inner self.

Let it be added, that encouragement was wanting upon the countenances of all the women at whom he looked; he saw aversion, antipathy, repugnance, rejection. It was clear that, for him, none other but Dea was possible. This aided him in his repentance.

VIII.

NOT HAPPINESS ONLY, BUT PROSPERITY.

How much truth there is in fables! Remorse for an evil thought is the searching touch of an invisible devil.

In Gwynplaine's case, the evil thought was not yet hatched, and he never felt remorse. But, occasionally, he felt regret.

Vague film of conscience!

What was there in it? Nothing.

Their good fortune was complete. So complete, that they were no longer even poor.

Between 1689 and 1704, a great change had taken place.

It happened sometimes, in this year 1704, that, at nightfall,

a large and heavy caravan, drawn by two strong horses, made its entry into such or such small sea-coast town. It was like the hull of a vessel turned upside-down, the keel for roof, the deck for floor, and set upon four wheels. The wheels were all of the same size, and no higher than those of stone-carts. Wheels, pole, and body—all was painted in green, with a rhythmical gradation of shades, varying, from bottle-green on the wheels, to apple-green on the roofing. This green color had ended by setting a mark upon the vehicle; and it became well known wherever fairs were held. They called it the Green-Box. This Green-Box had only two windows, one at each end, and a door behind, with steps. Above the roof, from a funnel painted green like the rest, issued the smoke. This peripatetic house was always newly varnished and freshly washed. In front, upon a bracket-seat attached to the vehicle, and with access to it through the window, above the horses' hind-quarters and by the side of an old man who held the reins and managed the team, two trolloping women of the gypsy tribe, costumed as goddesses, sounded the trumpet. The wonder-stricken citizens stared at and commented upon this machine, as it rudely jolted about.

It was the old establishment of Ursus, amplified by success, and promoted from a mountebank's stage to a theatre.

An animal, something between dog and wolf, was chained under the caravan. This was Homo.

The old whip, driving the hacks, was the philosopher himself in person.

Whence came this expansion of the miserable hut into an Olympian car?

From this fact: Gwynplaine was a celebrity.

It was with a sagacious foresight of that which is success among men, that Ursus had said to Gwynplaine:—They have made your fortune!

Ursus, it will be remembered, had made Gwynplaine his pupil. Unknown persons had worked upon the visage. He himself had worked upon the intelligence; and, behind the mask so successfully wrought, had inserted all that he could of thought. So soon as the child, grown bigger, seemed to him worthy of it, Ursus had brought him upon the stage, that is to say, upon the front board of the hut. The effect of this appearance had been extraordinary. All in a moment, the passers-by had admired. Nothing comparable to this surprising mimic laugh had ever been seen. No one knew how the miracle of communicable hilarity had been obtained. Some thought it natural, some artificial; and, conjecture being added to reality, everywhere, in the public places, in the markets, in the various stations of fair and fête, the crowd flung itself upon Gwynplaine. Thanks to this "great attraction," a shower had fallen into the poor money-box of the wandering group—first of farthings, then of pennies, and finally of shillings. One field for curiosity exhausted, they passed on to another. The rolling stone does not grow rich, but the rolling hut does: and thus from year to year, from town to town, with the growth of Gwynplaine's figure and of his ugliness, the fortune came that Ursus had predicted.

—What a service they rendered you there, my boy! said Ursus.

This "fortune" had allowed Ursus, the administrator of Gwynplaine's success, to have the vehicle of his dreams constructed; that is to say, a caravan large enough to carry a theatre and sow science and art in the public squares. Further still, Ursus had been enabled to add to the group composed of himself, of Homo, of Gwynplaine, Dea, two horses and two women, the latter of whom were goddesses in the troop, as we have just remarked, and servants. A mythological frontispiece was useful in those days, to a mountebank's booth.—We are a wandering temple! said Ursus.

These two trolloping women, picked up by the philosopher in the nomadic pell-mell of towns and suburbs, were ugly and young, and were called, by decree of Ursus, the one Phœbe, and

the other Venus. Read: *Fibi* and *Vinos*, seeing that it is proper to conform to English pronunciation.

Phœbe did the cooking, and Venus scrubbed the temple.

Furthermore, on the days of performance, they dressed Dea.

Outside of what constitutes—for mountebanks as for princes—public life, Dea, like Fibi and Vinos, wore a Florentine skirt in flowered stuff, and a woman's hooded cape, which having no sleeves, left her arms free. Ursus and Gwynplaine wore men's hooded capes, and large shoulder-knots, like seamen in the navy. Gwynplaine had, in addition, for his exercises and exhibitions of strength, a leather pelerine round his neck and over his shoulders. He took care of the horses. Ursus and Homo took care of each other.

Dea, from being accustomed to the Green-Box, came and went in the interior of that rolling house, quite at her ease, and as though she could see.

An eye that could have penetrated into the recesses, and noted the arrangements of this travelling abode, might have perceived in one corner—fastened to the wooden sides and immovable upon its four wheels—the old hut of Ursus, put upon the retired list, having permission to rust, and henceforth exempted from rolling, as Homo from dragging.

This hut, set up in the back corner on right of the door, served as chamber and dressing-room for Ursus and Gwynplaine. It contained, now, two beds. In the opposite corner was the kitchen.

The arrangement on shipboard is not more compressed and precise than was the internal parcelling out of the Green-Box. Every thing therein was fixed, set in its place, provided for, designed.

The caravan was divided into three compartments, partitioned off. The compartments communicated by openings, without doors. A piece of stuff, let fall, closed them in a manner. The rear compartment was the men's lodging; the front compartment was the women's lodging; the middle compartment, separating the two sexes, was the theatre. The orchestral instruments and the accessories were in the kitchen. A loft under the arch of the roof contained the scenery; and, by opening a trap-door in the loft, lamps were unmasked that produced magical effects in lighting.

Ursus was the poet of these enchantments. He it was who got up the shows.

His were varied talents; he had special juggler's tricks of his own. Besides the voices that he made you hear, he brought out all sorts of unexpected things, abrupt transitions from light to darkness, spontaneous formations of ciphers or words at will upon the partition, lights and shadows mingled with the fading away of figures, and many another oddity, in the midst of all which, inattentive to the gaping crowd, he seemed to be meditating.

Gwynplaine had said to him one day:

—Father, you have the air of a magician.

And Ursus had replied:

—This comes, perhaps, from my being one.

The Green-Box, constructed according to a skilful diagram by Ursus, had one ingenious refinement. Between the two fore and hind wheels, the central left-hand panel worked upon a hinge by means of an adjustment of chains and pulleys, and could be lowered at will like a drawbridge. As it was lowered, it set at liberty three props, also on hinges, which, remaining vertical while the panel was down, set themselves upright upon the ground, like the legs of a table, and upheld above it, as it were, a stage, the panel converted into a platform. The theatre was at the same time disclosed, enlarged by the platform which made the front of its stage. This opening—according to the out-of-doors Puritan preachers, who turned away from it with horror—absolutely resembled a mouth of hell. Probably it was for an impious invention of this kind that Solon had Thespia cudgelled.

Thespia, moreover, has lasted longer than is believed. The

theatre on wheels still exists. It was upon movable boards of this sort that, in the sixteenth and seventeenth centuries, they represented, in England, the ballets and the ballads of Amner and of Pilkington; in France, the pastorals of Gilbert Colin; in Flanders, at the fairs, the double choruses of Clement, called Non-Papa; in Germany, the Adam and Eve of Thailes; and in Italy, the Venetian shows of Animuccia and of Ca-Fossai, the Sylve of Gesualdo, Prince of Venousa, Laura Guidiccioni's "Satyr," the Despair of Philenus, "Ugolino's Death," by Vincent Galileo, father of the astronomer, the which Vincent Galileo sang his own music, accompanying himself on the viol di gamba, together with all those first attempts at Italian opera, which, after 1580, substituted free inspiration for the madrigal style.

The caravan, in its color emblematic of Hope, that bore Ursus and Gwynplaine and their fortunes, and at the head of which Fibi and Vinos trumpeted like a brace of Fames, was a link in all this grand chain, Bohemian and literary. Thespis would no more have disavowed Ursus, than Congris would have disavowed Gwynplaine.

On their arrival upon the public places in town or village, and in the intervals of Vinos and Fibi's flourishes, Ursus commented upon the trumpets, with instructive revelations:

—That symphony is Gregorian, he cried. Fellow-citizens, the Gregorian sacramental rite—that grand advance—has run a tilt in Italy against the Ambrosian rite and in Spain against the Mozarabic rite, and has only triumphed over them with difficulty.

After which, the Green-Box came to a halt on some spot of Ursus' choosing; and in the evening, the panel stage-front was lowered down, and the performance began.

The theatre of the Green-Box represented a landscape, painted by Ursus, who didn't know how to paint; by reason of which, when required, the landscape could do duty as a subterranean vault.

The screen, that which we call the curtain, was a blind made of silk with variegated squares.

The public was outside, in the street, in the open place, grouped in a semicircle around the show, under sunlight, or under sudden showers, an arrangement that made rain less desirable for theatres of that time, than for those of to-day. As often as they could, they gave representations in the court-yard of an inn. Hereby, they had as many tiers of boxes as there were rows of windows; and thus also, the more cramped the theatre, the larger the paying public.

Ursus figured everywhere in the piece, in the troupe, in the kitchen, in the orchestra. Vinos beat the kettle-drum, the sticks of which she handled marvellously; and Fibi thrummed the *morache*, a sort of gittern. The wolf had been promoted to be "utility man." He was decidedly a member of the company, and played occasionally the odds-and-ends of a part. Often, when they appeared side by side upon the stage, Ursus and Homo, Ursus in his bear-skin lightly laced, Homo in his wolf-skin better adjusted still, one could not make out which was the beast. This flattered Ursus.

HOW WE DROWN AND ARE RESUSCITATED.

By DR. CHARLES LANCASTER.

TO the unlearned my caption may seem to involve a solecism, because it is generally considered that, when a man has been submerged in water for any indefinite time—from two minutes to half an hour, or for a time longer than a person can ordinarily hold his breath—he must necessarily be drowned and dead, and resuscitation is hopeless. This is not, however, the case.

My object in this article is briefly to explain the cause and the process of drowning, whether partial or complete, and also to add a few sensible as well as scientific hints, as to the best mode of restoring the patient. It is to be observed, at the outset, that the human lungs, like the lungs of all terrestrial and air-breathing animals, are the or-

gans by means of which the blood is purified of its carbon and other deleterious substances, and preserved in a condition fit for free and easy circulation throughout the system. This circulation is necessary for the purposes of nutrition, and, with its coördinate function of respiration, is indispensable for the maintenance of life.

Now, the lungs, under ordinary conditions, are never, during life, wholly exhausted of atmospheric air. We will suppose that, with each expiration or expulsion of the air from the lungs, almost two-thirds of the whole volume inspired, or taken in, are expelled, the remaining one-third being retained, to be exchanged, in the next inhalation, for its equivalent of fresh air. This provision possesses the twofold merit of providing a ready means of expelling any foreign body which, by accident, may temporarily obstruct the passage of the trachea or wind-pipe (as when one swallows a substance "the wrong way"), and of keeping constantly in store a supply of air sufficient for the decarbonization of so much blood as shall pass through the lungs under a retarded circulation, caused by a temporary deprivation of fresh air.

It will now be easily comprehended that, if, in the ordinary healthy condition, as much as two ounces of blood pass through the lungs from the heart at every pulsation, and if about one inspiration of fresh air suffices for the purification of as much blood as passes the lungs in four pulsations, in the same ratio will a less quantity of air complete the decarbonization of a less quantity of blood under the retarded circulation which is inseparable from the condition of a drowning person. I have already hinted at the cause; now let us examine the process of drowning.

By a wise and beneficent provision of Nature, at the moment of submergence in water, and consequent exclusion of air from the lungs, the circulation of the blood is checked or retarded; and here comes the point of special interest. The sudden plunge into cold water is invariably accompanied by a gasp for breath. By this act the lungs are well filled with fresh air. The head is now submerged, and the breathing stopped. But there is an ample supply of air for the new condition, provided it be not too prolonged. And the time which this condition may safely be endured depends solely upon the quantity of air the submerged person carried down with him. The demand is reduced in exact ratio with the supply, and the difficulty is to know precisely at what point the supply shall fail; for, of course, the moment the last available cell of the lungs has given up its oxygen for the combustion of the carbon presented to the lungs, Death seals the victim for his own; because the carbon and other waste matter accumulates so rapidly in this little laboratory of life, and requires so constantly to be discharged, that, the moment the air is wholly exhausted, the blood loses its stimulating power, the diaphragm ceases to contract, respiration is impossible, and life is extinct.

By one other curious means, a similar condition of the person about to plunge under water may be secured, so that, in lieu of the *gasp* which fills the lungs with fresh air at the moment he so much needs it, both the circulation and respiration are instantly checked and reduced to their minimum of movement. I refer now to a blow on the top of the head at the moment of submergence. By this concussion of the brain a paralyzing effect is distributed throughout the nervous system, involving, of course, the nerves of all the muscles and tissues concerned in the acts of respiration and circulation. In this case, as in the former, the unlucky diver is reduced to a state analogous to that of the hibernating animal during his long and solitary winter repose, the only real difference being that the latter still breathes, which the former does not.

Now, the common theory of drowning is at fault in the two following particulars: First, it supposes that, because one has been under water for some time, he must necessarily be filled with water, and that this causes death, when the fact is that, the moment access to air is denied, the little guard called the epiglottis closes over the orifice of the larynx and prevents the entrance of the water; just as it does in the act of swallowing, to prevent the food from going down the "wrong way." Place a live chicken in a jar of carbonic acid gas, and you will have a good illustration of a drowning person. Again it is erroneously supposed that, because one has been under water for a considerable time, and there are no outward manifestations of life, vitality must be extinct. On the contrary, persons have been restored to life after submersions of three-quarters of an hour.

There can be little doubt that numerous persons who have died have been rescued from the water in ample time to have been

resuscitated if the proper means had been employed, and there is no period short of that which causes the muscles to give up their great vital principles of irritability and contractibility, where any hesitancy should be allowed in applying the best remedies at hand. When these functions of the muscles are once lost, the case, of course, is hopeless.

Now, as to the best method of resuscitation. If the drowned person is not filled with water, it is evident there can be little advantage in holding him up by the heels as is too commonly done; indeed, this treatment must be attended with considerable peril to the patient, supposing there is remaining any movement of the blood at all. Necessarily that position forces the blood to the head, thereby increasing the congestion of the brain, already present as the result of the suspension of the breath.

Another interesting, perhaps, but not very philosophical mode of treatment is to roll the patient over a barrel, as if he were drowned only in the bowels, and it was expected that, by dislodging the enemy at that point, the citadel of life would soon be recovered. Doubtless the most salutary treatment of a drowned person consists in placing him on his back in a half-reclining position, and keeping up a lively friction of the extremities with warm flannels, at the same time turning him gently and constantly from side to side, in order to put in motion the resident air in the lungs, for if this can be accomplished the diaphragm will contract, an inhalation may be looked for, and life saved. If these means fail, tickle the nose with a feather, or inject a little snuff into the nose, and follow this with the inflation of the lungs by the use of the bellows. Take a new or clean common hand-bellows, insert the nozzle into one orifice of the nose, close the other, close the mouth with the hand, and now slowly and carefully force the air from the bellows into the lungs, and immediately expel it again by a gentle pressure of the hand on the breast. If, after a repetition of this experiment a few times, there is no sign of life, you may consider the case hopeless.

MAGNOLIAS.

THE magnolia-tree, so beautiful for its leaves and flowers, so valuable for the wood of many of its varieties, is much less known and appreciated than many others not nearly so ornamental or so useful. To Pierre Magnol, who was prefect of the Montpellier Botanic Garden from 1688 to 1715, belongs the honor of giving his name to the genus. It embraces some ten distinct species, of which the magnolia proper, with its wax-like flowers, and the tulip-tree, with its buds streaked with green and pink, are the most conspicuous in North America. Many Americans, however, are more acquainted with the dwarfed varieties which come to us from China and Japan, than with the pride and glory of our own forests. The tulip-tree flourishes in the North, but the grand magnolia is peculiar to the South, growing in South Carolina and Georgia, and reaching its perfection in the fertile soil of Mississippi and Louisiana. But we will first describe the more humble varieties. The glaucous-magnolia is certainly one of the loveliest shrubs of North America. It is at home anywhere from Cape Ann, in Massachusetts, to Florida and Louisiana, and generally cared for under its common name—sweet-bay. In sheltered situations it is a little tree, about twenty feet high, but usually in the North it is a small shrub, with many stems growing from the same root. In the low country of South Carolina, it sometimes grows forty and fifty feet high. The small stems are erect, smooth, and of a bright-green color when young. The leaves are a shining, dark green, and fall in autumn. The flowers are at the extremities of the branches, and, from May to August, contrast richly with the crisp and abundant foliage. The blossoms do not appear so early in the North, where they may not be looked for before July. There are from eight to fourteen petals to the flower, which is of a creamy white, very fragrant, turning yellowish on fading. The bud-enclosure has three leaves. The fruit is a cone, consisting of numerous cells, which open for the escape of bright scarlet seeds, each suspended by a thread.

These cone-shaped seed-cases, in another species, give the

name to the cucumber-magnolia, in which the fruit exactly resembles the little green cucumber used in pickling. This variety is a tree, sometimes exceeding eighty feet in height, and measuring four feet in diameter, at a yard from the ground. The leaves are six or seven inches long, and half as broad. The flowers are five and six inches in diameter, slightly fragrant, the petals expanding but little, and yellowish white, with a bluish tinge on the outside. This tree is majestic, and of perfect symmetry in form. Its much-prized wood is fine-grained, and takes a high polish. It is more durable than the yellow pine.

A more beautiful tree is the auricle-leaved magnolia, which grows from thirty to forty feet high. Its leaves are from eight to twelve inches long, and its white flowers from three to four inches in diameter, with a pleasant odor. The wood is light and spongy, and not now used. It may, at some period, prove a poor substitute for cork.

The brown-flowered magnolia is merely a shrub, three or four feet high, with evergreen leaves of an elliptical, oblong shape. The flowers are small, very fragrant, and of a dull-purple color. It is a native of China, but with us it is a greenhouse plant, and the companion of the camellia.

There are three varieties of the Japan shrub, marked by red-purple, purple-white, and pure-white flowers.

The species which grows on the island of Nippon, reaches the height of ten feet, and its rough bark smells like camphor.

The umbrella-magnolia is remarkable for its great leaves. It grows to the height of thirty and forty feet, and trunk and branches are covered with a white bark. The leaves grow from the ends of the delicate branches, and are three feet long, and seven or eight inches broad. Growing pendent in tufts of three and four, they are an excellent sun-shade. The flowers, when fully expanded, are eight to ten inches in diameter, white, with a purple spot inside. A variety of this, only less wonderful for the size of its leaves and flowers, is found in the Atlantic and Middle States. The lofty-magnolia (*Magnolia excelsa*) is a native of Nepaul, where it grows from fifty to eighty feet high. It is the fine yellow wood called *champ* in joinery.

The Yulan-magnolia, of China, is remarkable for the number and the delicious perfume of its blossoms. It reaches a height of eight or ten feet, and blooms about the middle of April, the flowers appearing before the leaves, and completely covering the tree. A specimen mentioned in Downing's "Rural Essays," was grafted upon an American species. In 1850 it was fourteen years old, and twenty feet high, and at one time there were three thousand blossoms at once upon its branches.

But the stateliest of all is the Southern species, or *Magnolia grandiflora*. It is the most remarkable of all the trees of North America for the majesty of its form, magnificence of foliage, and beauty and fragrance of its flowers. It often rises to the height of seventy and eighty feet, even more, with a naked, smooth, columnar stem. If its head or crown of green has not been injured by tempest, it is always regularly pyramidal, or semi-elliptical. From May until August it is covered with its brilliant white flowers, terminating the younger branches. Its leaves are entire, oval, evergreen, and very brilliant on their upper surfaces. The flowers are often seven or eight inches broad, and their pure white, like delicate wax, forms a most charming contrast with the bright-emerald background. It is often called the big laurel, and its seeds are a vivid red, three or four, longitudinally arranged in cells. It grows from seeds, or from shoots or layers, which require two years to make roots capable of transplanting. It will not thrive north of New York, on account of the cold, but is now cultivated in England, France, and Italy. Its most remarkable characteristic is its perfume, which is the same as that of the yulan and the sweet-bay. The nearest earthly approach to what we suppose Paradise was, is in riding along a dusty road in Mississippi or Louisiana, to suddenly plunge into the cool depths of a magnolia forest. They are rare, for the planter has coveted the deep mellow soil which alone can feed the great bitter roots,

and the axe has killed them to make way for cotton. The saw-mill, too, is their foe. They still exist, however, interlacing their green pyramids so as to defy the sun, and forming a cool,

the delicate cane-reeds, while the dwarf-magnolia bends its flower-laden boughs almost to the reach of the hand, and the *grandiflora* lifts its verdant pyramids on the gentle slopes. That



Gathering Magnolia-blossoms in the South.

damp shade, such as Lebanon may have known in its glory. But Lebanon must have wooed and won a rose of Sharon to bloom on each drooping spray, before it could equal this forest, shining as the sunbeams glance through the polished leaves—blooming like a great garden with flowers delicate as camellias and larger than roses—while the warm summer air is voluptuous with the sweetest of earthly perfumes.

Another point from which to see this prince of trees to advantage, is from the numerous lagoons and bayous which vein the maps of Mississippi and Louisiana. The boat glides over the glassy water to the beach, and the foreground is fringed by

silent perfumed air, cooled by the breath of the water, seems the very atmosphere of love.

ON THE INVOLUNTARY MOVEMENTS OF ANIMALS.

BY DR. MICHAEL FOSTER, OF UNIVERSITY COLLEGE, LONDON.

II.

USES OF THE VIBRATORY CILIA.

OBSCURE as may be the efficient cause of ciliary action, its final cause, its purpose is, in most cases, obvious and clear. You have

seen that, on the pieces of frog's throat, the cork invariably travels in one direction. In the natural position of the membrane that direction is toward the frog's stomach. The air-tubes of our own lungs are lined by a similar ciliated membrane, and in them the direction of the movement is also uniform, viz., upward toward the throat. In this way the mucus which is continually being secreted by the air-tubes, is as constantly being carried upward out of the lungs. But for this, a mere cold would be sufficient to choke any one of us, through the accumulation of mucus in the lungs. Allow me here to call your attention to the beautiful and mysterious harmony in which these little cilia work together. The tiny stroke of a little hair, one-four-thousandth of an inch in length, could of itself effect but little. It is because there are so many of them, and because they all work together, that they are able to produce such bold, visible effects as the movements of pieces of cork or of mucus. We have reason to think, as we have seen, that the movements of the cilia of any given cell are not only produced, but ordered in and by the cell itself. In an isolated cell we may see the cilia not only at work, but working in harmony and rhythm. It is only when the cell grows faint at death that the individual cilia work irregularly, some being at rest, others in action; some working one way, some another. So long as the cell is strong and sound, so long do all the cilia work, and work together. On the surface of each cell there are generally several rows of cilia. The cilia of each row strike in unison, but the stroke of any one row is, in point of time, a little before that of the one, and a little behind that of the other, of its two immediate neighbors, so that the stroke passes in a wave across the cell, like a wave of the wind passing over a field of corn—passes over, too, in one direction only, that direction being determined by the necessities of the part, or of the animal, of which the cell is a microscopic member. If I were to scrape, for instance, the surface of one of these frog's throats, and to put the drop of mucus I carried away with the point of a knife under the microscope, I should, on examination, be a witness of the ciliary action of many isolated cells, and, in most cases, I should be able to declare, concerning each cell, which was the side nearest the mouth, and which the side nearest the stomach, because I could see the direction of the ciliary stroke, and that stroke I know to be from the mouth to the stomach. In each isolated cell the cilia work in harmony, but two cells whose natural bond has been severed may be working at different times, though working close together and almost touching each other. In the body, however, cell touches cell with a living touch, and the rhythm of the beat of each cell is pitched to harmonize with all its fellow-cells. Were it not so, did each cell follow out its own devices, the result would be a mass of eddies, a whirl of confused currents. You have seen that, even in the separated membrane, the ciliary stroke, as betokened by the cork which moves so steadily, is grandly uniform. And that uniformity, be it observed, is carried on without, as far as we know, any coördinating mechanism. No one has ever discovered any nervous apparatus to regulate the multitudinous cilia of any membrane. It would seem as if each cell just felt, by its primeval protoplasmic sensibility, the throb of its neighbor-cells, and as if that throb were the key-note by which all its own molecular processes were pitched.

I have spoken so far only of the cilia of the frog's throat, and of our own air-tubes, where the labor of the cilia is at best but an ignominious task. In many animals, however, their office is an honorable one, and their importance supreme. Time would fail me were I to attempt to give even a mere sketch of the manifold purposes wrought out by cilia in the economy of animal nature. To many, to very many creatures, it is the chief, to some the only, means of respiration. The lashing cilia constantly renew the water in contact with the general surface of the body, or circulate it through internal cavities, or pass it in due order among and between special organs, as, for instance, through the curiously-constructed gills of the oyster. Many animals live solely on the food brought to them by the whirl of ciliary currents, having no organs of prehension at all, and very many, though able otherwise to eat, gain a supplement of food in the same way. Other animals, again, have no other organs of locomotion but cilia; all the waters of the globe, from the great sea down to the roadside puddle, are full of wee creatures, which row themselves about by the rhythmic sweep of these tiny oars. And a still larger number of animals, in whose adult life ciliary action has but a feeble share, are found in their earliest days to be dependent on cilia for their power to move from place to place. In the grown-up frog the cilia are almost entirely confined to its mucous membrane; but the young

tadpole is clothed with ciliate cells from head to tail, and, before it has grown its long lashing tail, cilia, and cilia alone, form at once its means of breathing, moving, and feeding.

Were I to discuss all these multifarious instances of ciliary action with the fulness of detail that I have spent upon the frog's throat, I should be telling very nearly the same tale over again. In all cases, the work, the structure, the life-history, would be very nearly the same. In all we should see the same spontaneous rhythmic labor springing mysteriously out of the inner working of some transparent structureless tissue, either gathered into individual masses called cells, or spread in an unbroken layer over the surface of the body. In all we should see the movement exactly adapted to some special purpose, the position and form of the cilium, the direction, the force, the character, the time of the stroke, all bearing toward the one end. In all we should find the movement, though thus the result of hidden, deep-seated molecular motions, with its features ordained and fixed for a settled purpose, subject nevertheless to many influences, capable of being quickened, retarded, or suspended, by this or that change in outward circumstances. All this we might see and learn, and yet not be able, even with the highest powers of the most modern microscope, to catch so much as a glimpse of any structural machinery by which we might think ourselves able to explain the facts.

THE LIVING CREATURES IN OUR BLOOD.

And now let me direct your attention for a little while to an animal movement of another kind, but still of an involuntary nature.

If you examine under the microscope a drop of recently-drawn blood, you will see scattered among the many red corpuscles a few colorless, transparent bodies, called white corpuscles. These possess no very particular structure. They are pale, transparent, dotted over with refractive granules of various sizes, and in the centre of each is hidden a more solid round kernel, or nucleus. Not much else can be seen in them. Examined when the blood is first shed, they appear spherical; but, if you watch one of them attentively for a few minutes, you will see that a bulging or protuberance makes its appearance at one point of the circumference, and gradually increases up to a certain limit. The appearance is not due to any bursting of the sphere; the continuity of outline is perfectly maintained. The impression on the mind is as if the mass of the corpuscle were semifluid or viscid, and had flowed out in that particular direction; and one can easily satisfy one's self that what is gained at the point of bulging is lost elsewhere. The phenomenon is merely a change of form.

The movement thus first witnessed is slowly succeeded by other similar bulgings. The corpuscle, from being spherical, becomes, perhaps, pear-shaped; then, it may be elliptical; a little later on, quadrangular; after that, star-shaped, and so on. In fact, so long as the corpuscle can be kept alive, so long will it continue, minute after minute, to shift its form by flowing out, now in this direction, now in that. Not only does it thus shift its outline, but the very change in form readily becomes a change of place. If a bulging flows out to the right, say, and the whole body follows the protuberance, the result is a locomotion—a sidling to the right. And, by repeated manoeuvres of this kind, the little organism travels through appreciable distances.

This particular kind of movement has received the name of *amoeboid*, because it is exhibited on a much larger scale, and may be witnessed with much greater ease, in that interesting class of animals—lower down, as is said, in the scale of creation—of which the common amoeba is a well-known instance. In these creatures we are forced to admit the essentially vital character of the movement. At first sight, it seems strange that such things as blood-corpuscles—mere fragments of the body of an animal—should possess the power of independent movement and locomotion; and one is naturally led to think that the changes of form and place witnessed in a drop of shed blood are due to mere physical causes, are simply the result of changes of density or other inorganic processes going on in the fluid part of the blood. All attempts, however, to explain the phenomena in this way, though they have repeatedly been made, have, as yet at least, signally failed. Moreover, the amoeboid movements are influenced by circumstances very much in the same way as are ciliary and ordinary muscular movements. They last only so long as the animal, or the part which manifests them, continues to live. They are quickened by warmth, and retarded by cold. They are possible only within certain limits of temperature. They are subject to suffocation, to the action of anesthetics, of chemical agents, and of poisons. They are

influenced by electricity. In fact, they are so like in their history to ciliary action on the one hand, and to muscular contraction on the other, that one can hardly resist the conviction that all these are but members of one class, bound together by the common possession of some fundamental vital quality. Should it seem bold to speak of the kinship of the projection of an amoeboid protuberance, which perhaps takes minutes in the making, with the sharp, swift bend of a cilium, which is over and gone in a fraction of a second, allow me to remind you that time, like size, has but little differential value to a physiologist. Should it, on the other hand, seem too great a stretch to consider the undefined creeping of unformed protoplasm as of like nature with the smart, well-ordered action of curiously-constructed muscle, let me briefly put before you the essentials of the one and of the other.

HOW THESE LIVING CREATURES MOVE.

If we examine under the microscope one of the large amoebae of our fresh-water pools, we find that it is not homogeneous, but composed of an inner court and an outer zone. The inner court is somewhat fluid, and is crowded with granules; the outer court, though semi-fluid, has more solidity, is perfectly transparent, apparently perfectly homogeneous, with hardly a speck on the surface or in its substance; looking, in fact, for all the world like a band of molten glass. It is in the outer zone that the movements begin and are executed; the inner court of granules does but passively follow where the outer zone leads. And, looking attentively at the outer zone, one cannot help feeling convinced that its material is plastic in nature, like, as I said just now, molten glass; and that, in obedience to some inner working, it rises and falls in waves, now in this direction, now in that. These waves we call its movements.

And now let me ask you what takes place when a muscle contracts. It shortens, but also widens, at the same time and to the same degree. And what is true of the muscle is also true of each of the constituent elementary fibres. Each fibre widens as it shortens. When we examine under the microscope a single fibre engaged in the act of contraction, the widening is more easily seen than the shortening. The widening, in fact, seems to run along the fibre; or, in other words, a wave of, so to speak, lateral bulging sweeps through its length. In the ordinary contraction of a vigorous muscle, these muscular waves flow with amazing rapidity, but exhaustion and coming death diminish their velocity; and sometimes, in exhausted, ill-nourished, or dying muscles, the progress of the wave is so impeded, that, under particular treatment, the wave will last for many seconds, and is visible to the eye in the form of a woe, known under the technical name of the idio-muscular contraction.

Amoeboid movements and muscular contractions are, then, but waves of an irritable plastic material, and, so far, are alike; but they differ in two fundamental points: amoeboid waves are slow, muscular waves are quick; in this respect, muscle has the advantage over protoplasm. But there is a compensation—the amoeboid wave moves in all directions of space; the muscular wave is limited to one. Protoplasm is all-sided; muscle can do no more than bring its two ends together. What is gained in force and time is lost in character—the old tale, written large and often in the book of animal life.

If, then, we may regard amoeboid movements as essentially muscular in character, there comes to us in reference to them, as it did in reference to cilia, the question, What and where is the irregular stimulus which sets these movements going? To this we can only bring the same indefinite answer as before. The stimulus of the amoeba and of the white blood-corpuscle is, in most of the movements we witness, not from without, but from within; internal changes are the chief causes which disturb the equilibrium of rest.

Certainly, at least the equilibrium, the spherical-balanced state of the white corpuscles which circle in the blood-currents of our bodies, can be disturbed by no direct stimulus proceeding from our wills. They are independent, indeed, of the nervous system altogether.

But it would be hazardous to assert that all amoeboid movements are outside the grasp of nervous action. White blood-corpuscles are not the only elements of even our bodies which enjoy this protoplasmic power. As to what extent similar amoeboid movements go on, and what share they hold in the production of the total life of the economy, one cannot speak at the present moment with decision or authority; for the matter is a new one, and just now undergoing careful examination. But, most probably, inquiry will result in enlarging rather than in diminishing our present views of the importance of

these movements; and it is very likely that investigation will bring out many instances of their at least indirect control by the nervous system, and thus possibly by the will.

REMARKABLE CUTANEOUS CHANGES.

One such instance we may already claim. Frogs, as you are possibly aware, like chameleons, vary in color from time to time, being at one period, perhaps, of a light-yellowish green; and at another, of almost a coal-black, or of some shade intermediate between the two. This change is brought about by means of certain pigment-cells (cells filled with black granules), scattered over the skin. Each pigment-cell is capable of changing its form. It may exist either as a little round black dot, with the black granules gathered up into a heap, or as a straggling many-branched star, with the granules strewn through all the branches, or in any possible shape intermediate between these two. The transition from one form to another we may look upon as an amoeboid movement, though it differs somewhat from the manifestations of a white blood-corpuscle, since, as it is probable, the cell itself does not so much change in form, as the granules change their position in the cell, running to and from the centre, from and into the various branching paths. When the granules are gathered in the centre, we see only a small round dot; when most of the granules are away in the branches, we see a straggling blackish patch.

But, whatever be the exact nature of the change, this at least is evident, that when the black granules are concentrated into heaps, we see more of the natural abiding green or yellow-green color of the skin, and we say that the frog is pale. When, however, the granules are scattered in broad ramified patches, they hide much more of the natural permanent color, and the frog appears to us dark or black, and so with intermediate stages.

Now the point to which I wish to draw your attention is this, that the condition of these pigment-cells, whether they are to be dots or broad patches, concentrated or diffuse, is determined (whether directly or indirectly I do not venture to decide) by the action of the nervous system. By operations upon the spinal cord and other parts of the nervous system, we can to a certain extent make the whole or a part of a frog dark or pale as we please; we can concentrate or diffuse its pigment-cells by nervous action. Nay, more, this color of the skin is intimately connected with one particular part of the nervous system. The frog, like the chameleon, though to a more limited extent, wears its colors according to the sky. He is black when it is dull or dark, pale when it is bright. The color of his skin is affected by the quantity of light. And the light works chiefly, perhaps wholly, not by acting directly on the skin, but by an indirect influence through the medium of the optic nerve. Destroy the sight of a frog, and he becomes forthwith coal-black, unless some other exciting causes intervene. Thus between the pigment-granules of the web, say, of the frog's foot, and the light coming from the sun, there is in constant operation a line of communication, the links of which are the retina, the optic nerve, the spinal cord, and certain nerves of the leg.

Time will not allow me to pursue this subject further. I will only remind you of the common experience of grooms, that blind horses do not wear their coats as do horses which can see (so striking is the difference that many men will know a blind horse at the first glance a long way off), and I think you will agree with me that there are probably many ties in living beings yet to be revealed by physiology, and that in these amoeboid movements of protoplasm there may lie solutions of problems with which at present they seem to have nothing whatever to do. I might put before you, perhaps, the yet larger reflection that the "too, too solid flesh" over which Hamlet lamented, is forever quivering and vibrating with perpetual movements. I think I may venture to suppose that few of you, looking at these pieces of seemingly dead skin, would think that they contained within them springs of continual motion, such as those of which the pieces of cork have made us aware. The microcosm of the animal body is like the macrocosm.

The heavens, at first gaze, seem full of the intensest quiet and rest; yet we know that they overflow with perpetual motion and toil. So, to the diligent observer, pieces of seeming dead membrane, bits of skin, drops of blood, all fragments almost of living bodies, come to be seen as spheres of unrest and labor. We may see, if we do but look, the shuttle of life flying to and fro in the tiniest morsel of living stuff.

SKETCHES OF EARLY LIFE IN BOSTON.

No. VI.

HOW THEY REGULATED TRADE IN BOSTON.

TRADE, for the most part, thrives best when it is left to regulate itself. The *maximum* of prosperity is secured by the *minimum* of legislation. To undertake to settle by law how long a man shall work, and how much he shall work for; to determine what percentage of profit a trader may take, and to foster by protection one class of interests at the expense of another, is to violate the fundamental principles of sound political economy.

Now we will see how our early friends in Boston tried to manage their financial affairs.

In August, 1630, the wages of a master carpenter were fixed at sixteen pence per day, if meat and drink were also provided; "of the second sort of workmen," at twelve pence per day; and a fine of ten shillings was imposed upon both giver and receiver, if any thing above this was paid. Common laborers were forbidden to take above twelve pence per day, or six pence with food.

The next year these orders were rescinded, the presumption being that the good gentlemen who passed the law had now got their houses built, and ceased to have any personal interest in the matter.

But, after the lapse of one more year, the restriction upon wages was renewed, it being considered that the rates of compensation, which had risen to three shillings a day for carpenters, and two shillings and sixpence for laborers, had become excessive. It was urged that, with such pay as this, men could earn enough in four days to support them through the week; and, of course, it might be expected that the other two days would be passed in idleness and indulging in the use of tobacco and liquor, "which was a great waste to the Commonwealth."

It must have been somewhat hard upon mechanics, not only to have their wages cut down, but also to be liable to be disposed of after the manner indicated in the following enactment: "Whereas, Mr. Cullimar, servant to Mr. A. Mellowe, is employed in public service in making carriages, ordered, that John Humfry and John Endicott shall have power to *press any other carpenter* to supply the need of Mr. Mellowe, in lieu of his said servant."

For some reason, of which we are not informed, it was determined to withdraw brass farthings from circulation, and introduce something else in their place; whereupon it was "ordered that *musket-bullets* of a certain bore pass currently for farthings a piece, provided that no man is obliged to take above twelve pence at one time." We should hope not; forty-eight good-sized old-fashioned bullets would be about as much small change as a man would wish to carry in his pockets.

A unique kind of legislation is seen in the case of Mr. John Eales, who is "ordered to be placed in some convenient place for bee-hive making; the town to make up what his work wanteth of defraying the charge of his livelihood." A great many people would be glad to practise their trade on like conditions.

During the first four years, from the settlement of Boston, there were no shops for the sale of goods; but, if it was known that a citizen had in his possession a superfluity of any articles, over and above what he needed for the use of his own family, he would be called upon at his residence, and an offer made for the purchase of the same.

Neither was there any separate inn or ordinary, until the year 1634, when a tavern was opened by Samuel Cole, and John Coggan established a shop. At the same time the court passed an order for the "erection of a *marcate*."

A very unwise restriction upon trade is seen in a law prohibiting the purchase of any commodity from vessels arriving

at Boston, without express permission from the governor and some one of the assistants. Under such circumstances, it must have been all-important for retailers to be on good terms with the authorities; and, if human nature was the same then as it is now, it would not be strange if a pound of tea or a dozen of Malaga occasionally found their way to the gubernatorial mansion, as a kind remembrance from the grocery.

We are sometimes a little perplexed by the various schemes proposed in and outside of Congress for increasing our national revenue—one man declaring that the larger our debt the richer we are, because it is due to our own people; another man asserting that we have only to change our "promises to pay" into promises *not* to pay, with the general understanding that the latter shall be regarded as legal tender just as much as the former, and then we cease to have any debt at all; and *most* men seeming to think that the particular branch of business in which they happen to be engaged is the one which the public good demands should be free from onerous taxation.

On a small scale, we find indications of the same sort of financial sagacity in the times of our fathers.

In the year 1640, all people were forbidden to make any wheaten bread, either to sell, or for consumption in their families, it being hoped that, by reserving all the wheat raised in the colony for exportation, a large addition would be made to their wealth. The experiment worked so badly, that another law was soon passed, not only repealing the former, but forbidding the exportation of wheat altogether.

In this connection we cite another statute of a very singular character: it is "ordered that no man shall give his hogs any corn, but such as, being viewed by two or three neighbors, shall be judged unfit for man's meat; and that every plantation shall agree how many swine every person may keep, winter and summer." The intention of this statute was, to induce the people to feed their hogs with acorns, and reserve the corn for the use of human beings.

In 1643, we find the first intimation of an attempt to manufacture domestic goods, when a store of *cotton* was imported from Barbadoes; and the hum of the spinning-wheel and the rattle of the loom began to be heard in the habitations of the people.

This style of music has long since ceased; but, in its place, we hear the thunder of Lowell and Lawrence.

In 1652, it was determined to establish a mint in Boston, for the coinage of money—a step which the court had no legal right to take, and which no other colony in America ever dared to imitate. The government at home, however, having more important matters in hand, and being just then in a somewhat precarious condition, did not interfere at the time; and, in later days, this coinage proved to be such a convenience and benefit to the community, that, illegal as it was, no steps were ever taken to arrest the circulation of Massachusetts money. Mr. Hall, the first mint-master, appears to have made a profitable contract with the government, as he bargained to receive fifteen pence out of every twenty shillings, and soon amassed what was in those days a princely fortune.

Upon the whole, we have reason to doubt whether the general policy pursued by the authorities of Boston tended to the advancement of trade and the prosperity of the community. There were resources at command, which, if they had been handled with enterprise and skill, and without any undue restrictions on the part of the government, would soon have brought great wealth to the colony. A traveller from England, writing in 1663, says of the region: "Between the mountains are many ample, rich, and pregnant valleys as ever eye beheld, beset on each side with variety of goodly trees, the grass *man-high*, unmowed, uneaten, and uselessly withering; within these valleys are spacious lakes and ponds, well stored with fish and beavers." Grass growing *man-high* would be something of a curiosity in that vicinity now; but it must be remembered that, when this

man visited Massachusetts, the soil had never been exhausted by the removal of its products, and retained its virgin fertility. He goes on to speak of slate, as abounding in this quarter, "that could be split into pieces an inch thick, long enough for a dozen men to sit upon;" and of precious stones and metals as being found there, as lead, silver, copper, and tin. The reason, he adds, why so little is said about all this, is, lest these treasures should be claimed by the crown. There must have been another reason, more potent, and that was the non-existence of these valuable treasures.

Making due allowance for such exaggerated statements, it is undoubtedly true that the soil was much more productive than it is at present, and the fisheries and hunting-grounds could not have failed to yield a rich return, if their resources had been developed with industry and energy, and the government had been willing to let men alone in the prosecution of their private affairs.

It is from the time when they ceased to prescribe the rate of wages, the percentage of profits, and the conditions under which goods were to be purchased, that the financial prosperity and the rapid growth of Boston take their date. Then the sails begin to whiten her beautiful harbor, and her streets to resound with traffic. Then she began to be a power in the land, out-distancing for a time New York in her commerce, and rising to the highest place, among all the towns and colonies of America, in education and refinement. Then she began to bring forth a race of *real statesmen*, who, when the bell tolled the hour of our liberation from a foreign yoke, showed themselves competent to inaugurate the reign of a new republic among the nations of the earth.

WHAT SHOULD WOMEN STUDY?

By J. SCOTT RUSSELL.

HOME is an English word, an English thought; it is the place of the family; the fireside and the scene of family life, of family birth, growth, culture. English life grows and shines hidden, in the bosom of the family.

When, therefore, I speak of the occupation of a woman, I speak of her occupation in her sphere of "home administration." Man does his work abroad, without, in the world, in the crowd; woman's work is to organize, regulate, animate, illuminate home. There is her sphere, and in it she has work, duty, labor to do; industry, art, skill to exercise; intelligence, knowledge, to develop. Education is required, special in its object; training in arduous work, method in execution, technical education.

Woman's technical work is the organization and fulfilment of the duties of home life; and we must first examine the nature of these duties, before we can talk of the education and training they require.

The foundation of the home is marriage; the husband founds or finds the home; he brings his wife "home." He provides there shelter and comfort; and happiness is what he hopes always to find there. She has to make that. Henceforth his duties lie out of doors; hers lie indoors. He earns or gains their living abroad. He brings his earnings home weekly, monthly, yearly; that is his business. His wife's is, to spend that money—well, or ill?

The programme then of a woman's technical duty is simply this: How shall I spend my husband's earnings in our joint home, so as to make it yield him and us the best fruit? How shall I turn these hard-won earnings to best account?

"How to administer given earnings in the wisest, homely, household way"—that is a technical question, wanting some knowledge, teaching, training, education.

The money of a home has to provide for health, amusement, instruction. It has to provide fire, clothes, food, drink, music, reading, comeliness, knowledge, training, refinement.

Ought an English wife to know any thing about fuel or not? Should she know that there is good and bad coal?—that what is sold to her as best coal is oftener bad coal than good?—that bad coal produces smoke and flame and not heat, and that one wastes money

and the other uses it? Ought a woman to know this knowledge, or is it beneath her.

I must answer once for all, that I do not think any household knowledge of this sort is beneath any well-bred, well-born woman. When of two things you have to choose, whether you will do the better or the worse, it seems to me you have a grave responsibility. It seems to me, if you choose the worse, or don't choose, you are to blame. It seems to me, then, that a woman should know good coal from bad, or she may waste her husband's earnings. But next, if she buys only the best coal, comes the question: Is there a right way of using the coal and a wrong?

Ought an English wife to know how to use good coal; to use it to the purpose for which it is bought; to use it for light, cheerfulness, ventilation, warmth, cookery, cleanliness; or to use it to waste, smoke, discomfort? Is any knowledge necessary for that? Cannot anybody make a good fire?—keep a good fire, prevent smoke, maintain cheerful heat, warmth without waste?

Verily, there are few women who know this: the art to make, to maintain a good fire without excess, without waste, without smoke. Much science goes to understand a fire. 1. What is fuel made of? 2. What feeds the fire? 3. What wastes the fire? 4. What regulates the fire? 5. What makes flame? 6. What wastes heat? 7. What preserves and maintains heat? 8. What spreads it equally round a room? 9. What creates smoke, draughts, rheumatism, and colds?

It is not the work of a moment to understand and answer all these questions. A wise housekeeper should have asked them all, and got a good answer to each; that is one element of English home, health and comfort. Can every English housekeeper solve all this?

To feed her household well, agreeably, wholesomely, without stint, without waste—there is a technical problem of home life. What does each kind of food cost? What parts of food are the more wholesome, the more nutritious? What kinds of food do harm?—to the young, the middle-aged, the old? What quantity should be cooked, so as to give plenty without waste? What is the real value of each kind of food compared to its price? What is the price of food bought wholesale and bought at retail? What is the true weight of good kinds of food? How do I know good food from bad? How can I tell adulterated food from pure and wholesome food?

What are the wholesome ways of cookery? What kinds of cooking render wholesome food more or less nutritious, palatable? What dishes are comely, elegant, clumsy, gross, vulgar? How can I use the least sum of my husband's earnings in housekeeping, and yet never make him feel in want of any thing?

Shall I be told that all these things come by intuition, by experience, by practice? That they are for the servants to study, not for the mistress? That in every English household they are already perfectly well done? If I am assured that this is already known and done, I have only to admit, that no technical education in housekeeping is required by Englishwomen.

But I fear the truth is less pleasing; that many an Englishwoman sorely feels that that part of her education is at least not perfect. But I fear that many more Englishwomen and Englishmen do not know the truth about cookery and food. English food is often of the best materials in the world. English fuel is also of the best. English cookery, as a whole, is wasteful in the extreme, both of food and fuel. It is the fault of the Englishwoman; her want of technical education. She neither knows what is right, what is wrong, nor can she teach her servants what she herself is so ignorant of—the art of nutritious, wholesome, elegant, economical cookery.

Should the mother of a family know any thing about her own clothes—her husband's—her family's? What sort, quality, price of stuff, they should be made of? What stuffs wear well? what wash well? what wash out? Which parts wear out first? How to make these parts last the longest? What sewing holds? How many yards of stuff go to each piece of dress?—how much for lining, how much for trimming, how much for shaping, how much for sewing?

Should the head of a household know how to make any thing with her own hands—out of her own head? to cut out, to shape and fashion, to use a sewing-machine; to sew, embroider, mend? Should she know all about children's clothes, or nothing? Perhaps the Englishwoman we speak of may never want any of these knowledges; she is born above all these things. But may I ask: Is it of no use to

know thoroughly the things our servants have to do, or our shopkeepers? Should we not know when we are well served? when we are ill served? to distinguish between those who do well, and those who do ill; teach our inferiors, if they don't know; criticise their blunders, detect and correct their faults? Is it beneath the head of a household, to add to the pride of birth and the power of wealth, the excellence of superior intelligence and knowledge? Would it diminish your respect for a stately dame of a noble house, to know that she spared her husband's purse, and looked carefully after her own household? I know of a queen of ancient race, who taught her daughters to wash their own lace; for as she wisely said, "My dears, you never know what you may come to!" Was she a foolish or a wise mother?

All about clothes I think woman's work and woman's duty: price, stuff, shaping, sewing, durability, washing, ironing, and mending. A woman who cannot do all these things, and teach them to servants and daughters by example and precept, has not to my mind got a good technical education.

There is no such physician as a wise wife or mother. Not to cure disease: that is a doctor's work: but to prevent disease, or to stop it at starting. What are our gravest illnesses?—neglected colds, indigestions, headaches. Who first finds out that we are ill? Who knows what has caused our illness? Who first takes alarm? Why should not every wife know the early symptoms of disease, the cause, the cure? There—not by the sick-bed, or in the hospital, but there, by the family fireside, the kindly mother should wisely watch the first symptoms of disease, wisely give the early warning, wisely apply the simple cure. Which is better in the house, a wise wife, or a perpetual physician? There is no technical training so valuable to a woman as that which shall enable her both to keep the doctor out of the house, and to send for him the moment he is wanted.

The most important part of the Englishwoman's home duty is still to come. The character of the next generation of Englishmen and Englishwomen is to be of their mothers' forming. Nearly all the education that forms character is mother's teaching—home education, family training. School may modify, but cannot supersede this first apprenticeship to human life. The world may cover and obscure the marks of mother's breeding: that early growth can never be uprooted!

If, then, the mother's teaching founds the future character, sows the early seeds of feeling, plants the first roots of principle, settles the tendencies and aims of life, grounds habits, prunes error, weeds out follies, checks faults, develops hidden talent, encourages native energy to steady application, and makes good the weak places of the young human creature—what after-thought, and pains, and toil, and painful undoing and still more painful regret, may not a wise mother spare her children's lives! What glorious privileges may she not confer on these young human souls, making of them treasures for their friends, their home, their country, and their God?

All nature is a book—a child's book. Its mother is nature's best interpreter, if only she first knew!

A mother's teaching, home education, family training—what a wide field of mother's work—all a child should know, all that its mother should be able to teach!

I have spoken only of infancy, of the first six or seven years, when as yet the school is not, and the pedagogue has not entered on the scene. If the mother's work must now cease, how glad will she be if she has done it well, and how grateful her children ever after! But must it now cease? Can a mother after seven be of no more help to her boys or girls—teach them no more? Let the mother herself say: can she help her boys in the evening, or in the early morning, with their figures, their reading, their exercises?

For my part, I doubt much if girls blessed with such a mother need ever go to school, or could ever better themselves by it. I am quite sure that a man would far rather marry such a mother's girl than the best boarding-school miss of the most fashionable girls' school.

But even if mothers do not or cannot teach all their children all they should know, of how great advantage to initiate, to choose, to watch the education! What teachers would grow up under the inspection of well-taught mothers for the education of their well-prepared children! Thus every knowledge of the mother proves a treasure to her child.

FRENCH MORALS AND MANNERS.

BY A ROVING AMERICAN.

No. III.

WE were talking last week about the comparative intimacy of young girls with their male unmarried friends in America and in France, and were proceeding to state that, even at Paris, where the largest liberty is allowed to the stranger within its gates, our intrepid American girls may be as "fast" as they were on this side; but Americans and English constitute separate societies from the French people, and the few who gain admission into French circles are, perforce, compelled to conform to the usages which regulate it, and therefore pronounce it "slow," or "horribly stupid." Just fancy the feelings of Miss Flora McFlimsy when debarred from "flirting" with half a dozen men for a whole evening, and compelled, actually, to act the part of a modest and sensitive girl, capable of blushing!—at the same time seeing "old married women" of twenty-five monopolizing the most agreeable men! Would she not have good cause to be even more disgusted, than on the occasion when she dissolves in tears at having "nothing to wear" at the Stuckups' ball? If Miss Flora be a fair specimen of a large class of New York women, is it not a proof that our system is not so perfect as to allow us to sneer at our French neighbors?—for there can be no Flora McFlimsy under their system. The French girl cheerfully foregoes all these preliminary skirmishes, contenting herself with the loss of the short-lived gratification of "flirtation" with a dozen different men while single, to be followed by total neglect and oblivion a year after she is married. Her life only opens with marriage—does not close as far as society is concerned: nor does matrimony, for her, bear inscribed over its threshold the warning which Dante places over the gate of hell:

"Lasciate ogni speranza
Che voi entrate!"

To her it is the beginning, not the end of her social triumphs; for the woman who is most captivating abroad is apt to be the most charming at home; the sunshine of her inner life reflecting on her outer one. "But," says the American critic of French morals and manners, "if the French girl does not flirt, and is as demure as a nun *before* marriage, she takes it out afterward. She don't act well as a wife, sir—in fact," says our friend General Andrew Jackson Jenkins, growing red in the face, "we all know what an immoral people the French are; and how little they respect their marriage-vows! Heaven forbid we should ever introduce French morals and manners into our free country!" and the general proudly glances at his virtuous spouse, arrayed in the spoils of French milliners, and evidently uneasy in them, watching with a weary air the crowd in the court of the Grand Hotel, while the Misses Anna Maria and Eliza Jane Jenkins are flirting furiously with two fiercely-mustached foreigners, who claim to be Polish princes, but whose principalities are in dream-land, with two wives each already, in different cities—now very devoted to the young Americans, or their "*dots*."

The young ladies also share in the opinions of their parent, and believe that, in France, only young girls are watched, and marriage is a charter of license—the *concequences* only being observed as far as public scandal is concerned; the *politesse* of *mon-sieur* being cheerfully extended to the peccadilloes of *madame*. But this is also a great mistake: since the French wife is the most circumspect, and even prudish, of women, from the English or American point of view, and does not allow herself a tithe of the privileges claimed by her freer Anglo-Saxon sisters. I speak, of course, of the mass, not of exceptional instances in the court circle, or among the butterflies of fashion, whose hearts are as empty as their heads. The average French woman has a nervous terror of doing or saying aught which

might "compromise" her—a shuddering sensitiveness at being talked about—which makes her *very cautious* of giving any pretext to the tongue of scandal—quite as much so as in her guarded girlhood.

The Frenchwoman receives her husband's male friends, or her own, chiefly in public: at her box at the opera; at the public promenades of the Bois de Boulogne, or open-air concerts, or at her receptions; and one must be a friend of long date, or exceptionally lucky, to gain the *entrée* familiarly to her house. It is long before you cross the threshold, except on formal reception-days, when all the world she knows crowd her *salons*, if she be pretty, popular, or the fashion. Gentlemen calling on other days will not be received; and, for the rest of the week, she devotes herself to her domestic duties, never interrupted by those casual callers, who fritter away so much of a woman's time in other countries. She is a busy bee, an indefatigable worker.

The *flâneurs*, or idlers, of Paris, are all male. French hospitality does not take the form of heavy feeding, dinner-giving not being a general habit in private circles; and the frugal way most French families habitually live does not admit of that form of entertaining. The practical economy of a French *ménage* is very great, and the quantity and quality of food which constitute the daily dinner would not satisfy the stomachs of the heavy feeders of Albion and America. But, contrary to popular prejudice, the Frenchman *does* dine at home every day, and the patrons of the restaurant are not Parisians, but provincials, or strangers. "But," asks a wondering damsel, "if neither flirtation, nor courtship, nor even the unrestricted intercourse of young people, be permitted, how do the girls contrive to get married? Women must be as regularly sold there as in the Eastern slave-markets." The question is a natural one, and the "*marriage de convenance*," so customary in France, is the one part of that social system against which the writer confesses his own prejudice: believing some love-making and intimacy in advance to be indispensable to a correct choice, and to the chance of happiness afterward. Yet they certainly dispense with these in France, and the young people have the pathway to their future union carefully smoothed and prepared for them by their relatives, often before they have had the pleasure even of knowing each other. These relatives make all the arrangements as to the bride's *dot* and the groom's settlements, in the most business-like way, and the union of the two hearts and hands is treated as any other civil contract would be. That the result of these marriages, thus contracted, is usually fortunate, I believe.

That they lead to general matrimonial infidelity, I know to be untrue. But to urge that it is the surest way to secure a congenial companion "for better or for worse," would be to admit that marriage is, at best, a lottery—a lowering of our high ideal of what it ought always to be—a perfect union of hearts and hands.

But the Frenchman and Frenchwoman, it must be admitted, though overflowing with expressions of sentiment, have at heart really very little of it. They are eminently practical, and hard common-sense is their most striking characteristic. This matrimonial brokerage, therefore, suits them. It would not suit some of us, though, I fear, it is becoming much more common in practice than in the earlier days of our republic, when the golden calf was not so universally worshipped by men and women as now, and when some things in life were regarded as superior to money. Our young ladies dispense with the services of the matrimonial broker, but do a thriving business of this kind on their own account. The phrase, "What is he worth?" is not a French one, nor are the two words synonymous in any other language than our own. Yet that inquiry is often made by soft lips here, and a *good match* means a good speculation, in our vernacular—that is, "one that pays." Let us not, then, play the Pharisee with our French neighbors, thanking God that matrimony, with us, cannot be defined as a mat-

ter of money, nor Cupid give place to his cousin Cupidity in our court of Hymen.

When the mutual friends have arranged every thing, and the young people have found each other agreeable, and have plighted their troth, the engagement is announced, and marriage shortly follows.

More liberty of choice, however, is given than is usually supposed, although the first selection of the future spouse is generally made by the parents.

The man does not entirely drop his club or his bachelor friends, but does not present many of them to his wife, nor entertain them much at his new home. She, on her part, rapidly develops from the chrysalis into the butterfly, her real life commencing with her marriage; and she now enters society to enjoy herself, and take the position she can win in it. The shy, silent girl expands, as though by magic, into the graceful, sprightly woman, and the marriage-ring seems to have wrought on her the marvels of Aladdin's lamp. Nor does this seem merely the dropping of a mask, but the result of previous training and education; so that, instead of being a galling yoke—a surrender of her freedom of thought and action—within proper bounds, marriage is to her the charter of her liberation from those restraints which maidenly modesty and the custom of the country imposed upon her. That the Frenchwoman abuses these privileges, as is commonly believed in English and American circles, after long and careful observation I am disposed not only to doubt, but positively to deny. It is a slander upon them, which has its foundation only in the depraved imagination of dissolute romance-writers, and of credulous foreigners who adopt their fictions as facts, acting the part of "prurient prudes" as well as Pharisees, imagining immorality where none exists, and judging evil out of pure prejudice. For the education of the French girl usually blends religious with secular instruction. The best schools are the convents, such as the *Sacré Cœur* at Paris, where the morals and manners, as well as the minds of the young girls committed to their care, are faithfully attended to by the accomplished women who compose the sisterhood. The semi-conventual discipline of these institutions, where the parental supervision is always permitted within certain bounds, keeps the hearts and minds of these young creatures free from the evil associations and dangerous intimacies with unfit companions, so perilous under any common-school system, and unavoidable even at more select private establishments. The French girls are taught to reverence religion and practise its precepts, to obey their parents, and to respect their elders, as well as crammed with the "ologies" and "onomies" which occupy our "young ladies," and the "accomplishments" which make our Flora McFlimeys and strong-minded women: converting the finished school-girl either into an affected flirt, or a man in every thing save in beard and breeches. As far as the preparation for making a good wife and a feminine woman may go, the French system is the best. For the creation of politicians in petticoats, the American system "beats all creation;" for what other people, ancient or modern, can boast such epicene women as we, in this land of liberty, have seen in these latter days?—women who have taken *au sérieux* Lady Macbeth's aspiration, and have really "unsexed" themselves!

The French girl, on her marriage, enters society by the "ivory gate," not having lost all her illusions, nor withered the fresh flowers of her virginal spring in the heated atmosphere of flirtation, which has been the breath of life, since early girlhood, to her Anglo-Saxon neighbors. In one of his later novels, Lord Lytton (who is not now so young as he once was) breaks into a most glowing apostrophe to "Youth!" for the loss of which even fame, world-wide as his, cannot compensate him. But, a thing more unlovely and lamentable than its natural flight by the lapse of years is, the loss of it prematurely by the forcing system of modern society, which sows the wrinkles and the weariness of old age on the brow and heart of youth, with-

ering and blighting the bud ere it has had time to develop into the ripened fruit. From this evil, at least, of bearing old heads upon young shoulders, the French system saves its young mothers of the coming generation, who are not *blasé* and *fané* before reaching womanhood, through flirtation.

THE THEORY OF SLEEP.

By H. CHARLETON BASTIAN, M. D., F. R. S., OF THE LONDON MEDICAL UNIVERSITY.

WHAT PART IS IT THAT SLEEPS?

FOR the developed consciousness of a highly-organized animal, there is no rest in the waking state. Impressions are continually pouring in through one or other sense-avenue, which stimulate and keep up trains of thought. So that, if occasional periods of rest are desirable for all organs, it would only seem possible to bring this about, in the case of the brain, by some mechanism which should practically deaden the sensibility of the sensorium, or nerve-centres, upon which stimuli, acting through the senses of sight, hearing, smell, taste, or touch, impinge. In this way consciousness would be for a time blotted out, and the function of thought held in abeyance. This, as I shall now attempt to show, is the object and nature of the state of sleep. It is a condition due to the temporary and periodical inactivity of the most specialized portion of the nervous system, the brain; and the slumbering insensibility of this highest organ of animal life involves, as a consequence, a similar state of inactivity for the other organs of relation, while the functions of mere vegetative life are carried on in the usual way; the heart beats, the lungs perform their accustomed functions, and most of the glandular organs elaborate their secretions, as in the waking state. Thus, although it is usual to speak of the individual as sleeping, it is really only his or her brain and its immediate dependencies, the sense-organs, which sleep. It is for the brain alone that this special provision requires to be brought about, on account of the delicacy of its organization, and the subtle and peculiar nature of the functions which it performs. Consciousness itself must be deadened, if the organ of consciousness and thought is to obtain that rest which is necessary for the continuance of its functional activity. We do not mean to say that other parts of the body do not also share in the advantages which are to be derived from periodical sleep. The voluntary muscles, for instance, must benefit by this period of rest, when nutritive repair may take place more effectually in those which have been especially called into action during the previous day. But the various muscles, even during our waking state, have also their periods of rest; we are not always engaged in muscular exertions, and, when so employed, alternate demands are made upon different sets of muscles—so that periods of sleep are not so necessary for the restoration of vigor to our voluntary muscular system. And even those purely organic functions, the continuance of which, depending upon the action of involuntary muscles, is necessary for the well-being of the individual, are intermitting rather than strictly continuous. Thus, the pulsations of the heart, and the movements of respiration seem continuous, but still there is even with them a periodicity which is able to include, between the successive actions of these organs, distinct periods of rest. It can be easily computed that the diurnal aggregate of these periods of rest for the heart would amount to no less than six hours, and, for the muscles concerned in respiration, even a still longer period. Glands, also, have their periods of rest and activity in the waking state; while for the brain, as we have before shown, the only possibility of repose, and any thing like complete rest, is to be found during sleep, when consciousness and thought are in abeyance.

THE CONDITIONS OF ACTIVE CONSCIOUSNESS.

How, then, is this state of unconsciousness induced? To enable the reader to understand the reply which is to be given, a few other fundamental facts in physiology must be briefly alluded to.

The action, or what is called the functional activity, of an organ depends upon its being maintained in a due state of nutrition; for, if the structure of an organ is defective, or spoiled, by virtue of a faulty nutrition, we can no more expect it to act in a proper manner than we can expect a watch to keep accurate time when its mechanical adjustments are either broken or out of gear. Or, to take an il-

lustration which elucidates our present meaning better: just as no one would expect a steam-engine to continue in activity after the supply of coal had been stopped, the combustion of which furnishes its motive power, so it could not be expected that any organ of the body would continue to perform its accustomed actions or functions after that which supplies its motive power has been cut off. Now, in the case of animal organs, the blood supplies the pabulum, which serves as fuel in enabling them to continue their functions—under the special guidance and control of one of them—the central nervous system. For, as we have before said, every action taking place in a living being is possible only by the death and molecular resolution of those portions of tissue-elements which occasion the vital manifestation; and this great law of life involves the further necessity of constant and molecular nutritive repair, if the functional and structural integrity of the organs is to be maintained. The material for this repair is supplied by the blood, which is impelled, by the contractions of the heart, through a system of closed tubes lying among the elements of almost every tissue of the body. These blood-vessels have muscular and contractile walls, and gradually diminish in size till they terminate in a dense network of capillary canals, having thin membranous walls, through which the nutritive juices are enabled to exude, so that they may be taken up by the tissue-elements among which the capillaries lie. It is now well known, also, that one of the most obvious duties of the great sympathetic system of nerves and ganglia (the nervous system of organic life) is to regulate the calibre of these contractile tubes, through which blood is conveyed to the various organs of the body. By the stimulation of certain parts of this nervous system of vegetative or organic life, the vessels which receive their nerves from the parts stimulated may be seen to contract and notably diminish in size; while if the ganglionic nervous influence is cut off from these vessels, by section of the nervous trunks going to them, then, on the contrary, the same vessels are seen to dilate to a diameter even beyond that which is natural to them. By a mechanism such as this, therefore, great differences may be brought about in the amount of blood sent to an organ, according to its varying degrees of functional activity at different times, and its corresponding need of a greater or less supply of nutritive fluid to compensate for the molecular waste which it is undergoing. And it may be laid down, indeed, as a general rule, that the more active the organ, the greater is the supply of blood which is sent to it, the quantity actually sent being regulated to a nicety by a most complex but marvellously-adapted nervous mechanism.

THE CAUSE OF SLEEP.

Now, the state of sleep, as we have before specified, is one which is essentially characterized and produced by a more or less complete arrest of the functions of the brain, the organ presiding over the functions of animal life. How, then, is this arrest of function brought about? The answer most likely to suggest itself to any reader of this paper would probably be, by a diminution in the amount of blood sent to the organ. But, curiously enough, it is only within the last ten years or so that physiologists have begun to entertain this view. It was formerly thought that the state of sleep depended upon a congested condition of the vessels of the brain; that is, upon their being more or less distended with blood, moving, however, with less rapidity than natural. This distention, with slow movement of the blood, would, it is true, be unfavorable to the functional activity of the organ; and then, in addition, it was maintained that the pressure on the delicate brain-tissue produced by the distended vessels was in itself an even more powerful cause of sleep. On this theory it was difficult and almost impossible to account for the production of the congestion, and there is reason to believe that the efficaciousness of pressure upon the brain-pulp, in bringing about sleep, was maintained principally under the influences of a false but supposed analogy existing between this normal physiological condition and certain states of disease which are especially characterized by the most profound unconsciousness. These states are known by the names of stupor and coma, and it is perfectly true that they may be induced by undue pressure upon the brain, occasioned by portions of depressed and fractured skull, for instance; while it is also true that in other cases such states are accompanied by a very full and distended condition of the vessels of the brain, with dark-colored and more or less impure blood. But the fact that sleep is produced in quite a different way rests principally upon the results of observation and experiment. Even Blumenbach, in the end of the last century, advocated the view that the proximate cause

of sleep was a diminished flow of blood to the head; a view which he was led to entertain from observations made upon a young man who had fractured his skull. Dendy, also, states that in 1821 there was a woman at Montpellier, who had lost part of her skull, so that the brain and its membranes were partly laid bare. "When she was in deep sleep," it is said, "the brain remained motionless beneath the crest of the cranial bones; when she was dreaming, it became somewhat elevated; and, when she was awake, it was protruded through the fissure in the skull." But, in 1860, Mr. Durham proved experimentally that in certain animals during the state of sleep the vessels on the surface of the brain were notably smaller, and contained less blood, than when the same animals were awake. Dr. Hammond, of New York, also, shortly afterward, by somewhat similar experimental researches, was enabled to corroborate the conclusions arrived at by Mr. Durham. And now, these observations, together with others of a somewhat similar nature, having gone so far to show that the brain contains notably less blood in its vessels during sleep, the doctrine may be said to be fairly established that a comparatively anemic or bloodless state of the brain is the principal determining cause of sleep, we are thus left free to inquire, What is the actual cause of that diminution in the blood-supply which induces this state?

PHYSIOLOGY OF GOING TO SLEEP.

AN interesting little book has recently been published by Mr. C. H. Moore ("On Going to Sleep"), in which he endeavors more especially to answer this last question. He insists, as we think, very properly, upon the fact that the transition from a condition of wakefulness to one of sleep is really at the last an *abrupt change of state*, and therefore one which cannot be adequately accounted for by relying upon such general causes as weariness or fatigue of body and mind. All these, it is true, are powerful predisposing causes, but the immediate effective cause must be something more specific; and there are many reasons for believing that this is the discharge of a stimulating influence from certain ganglia of the sympathetic system in the neck along those nerves which are distributed upon and regulate the calibre of the arteries that supply the brain. The effect of this outgoing stimulus is to cause a diminution in the calibre of these arteries, so that they carry to the brain a smaller quantity of blood—a quantity inadequate to maintain the functional activity of the organ, and therefore leading to a state of unconsciousness, though perhaps sufficient to enable the nerve-elements to undergo that amount of nutritive molecular repair which shall fit them for the activity they may be called upon to display on the morrow. It seems probable that there is a kind of inverse relationship existing between the activities of those parts of the sympathetic nervous system which supply the cerebral arteries and the cerebrum or brain itself—a kind of antagonism between the nervous system of organic and that of animal life. And it is perfectly consistent with other known physiological phenomena for us to imagine that in general, so long as we are awake, and the brain is in a condition of functional activity, an influence emanates from it along those nerve-filaments by which it is in connection with the cervical sympathetic ganglia of a repressive, or, as physiologists would say, of an *inhibitory* nature. Although such a communication cannot be actually demonstrated, yet various reasons lead us to believe that it almost certainly exists through the intermediation of fibres passing through the upper part of that elongated continuation of the brain known as the spinal cord. So long as this inhibitory stimulus streams down from the active brain above, the action of the cervical sympathetic ganglia is restrained; but when, after the fatigues of a day spent in more or less bodily and mental exertion, the vigor of the brain is diminished (as the relaxed or wandering attention testifies), then there comes a moment of abstraction, when the action of the brain is so slight that the inhibitory influence proceeding from it is no longer capable of holding in check the sympathetic ganglia. These, set free from the cerebral influence, begin to discharge their accumulated force, so as to lead to a contraction of the cerebral arteries and a diminished supply of blood to the brain. This lowered supply of blood necessarily leads to a still further diminution of brain-energy, and thus the freedom of the cardiac ganglia from cerebral control is rendered more perfect, and the condition of sleep the more sound.

PHYSIOLOGY OF WAKING UP.

AFTER hours of repose, however, during which we must suppose nutritive repair has been taking place, the irritability of the nerve-cells

in the brain has been restored to its maximum condition, so that they are now rendered capable of responding to such slight impressions, through one or other of the sensory organs, as would have passed utterly unnoticed soon after sleep had been induced. Now, some slight impression, whether of sight, sound, or touch, is capable of arousing the consciousness, and completely putting an end to that state of sleep which had for some time previously been gradually growing less and less sound. The brain is again in activity, the sympathetic ganglia are once more subordinated, so that the cerebral arteries have redilated, and thus the supervention of the state of wakefulness is at the last more or less sudden and abrupt, just as we have seen that the final transition from the waking to the sleeping state was an abrupt one. The slight impression upon the reinvigorated sensorium must have exercised a paralyzing influence upon the cervical sympathetic ganglia sufficient to cause the redilation of the cerebral vessels, and its consequence a state of wakefulness.

Space will not permit of our going into details concerning the state of sleep itself and the phenomena of dreaming. We will only say that, from a consideration of many facts, it seems more than probable that certain parts of the brain may sleep while others are awake, and that great variations in this respect take place during the total period of sleep; all these tending to show that the branches of the cerebral arteries have separate and smaller nerve-centres (all in connection, however, with the great cervical ganglia), so that certain of the arterial branches may remain dilated, while others are in a state of contraction.

We can only allude, also, to the different requirements of different individuals as regards their amount of sleep—differences dependent upon age, mental activity, and other circumstances; and to the remarkable instances on record in which sleep has supervened in the most exceptional circumstances—even as in the case of Damien, in the midst of the most diabolical tortures on the rack. These anomalies are much more capable of explanation from a consideration of the theory of sleep which we have just been unfolding, than if we attempt to account for them by a reference to any of the views concerning this mysterious state which have hitherto been in vogue.

LIGHT AND SHADE.

WOULD love be love, without love's sigh?

Would rest be rest, were toil unshared?

Would joy be joy, if pain could die?

Or flight be flight, to wings unsnared?

Would home be home, were cares unknown?

Would light be light, were darkness dead?

Would wheat be wheat, were tares unown?

Or hope be hope, if doubts were fled?

Would heights be grand, were ways less steep?

Would shores be blest, were seas untossed?

Would smiles be fair, did we not weep?

Our loved so dear, were hearts unlost?

Oh, calm is deep, though storms are loud;

And flowers are gay through winter's breath;

And stars more bright where looms the cloud:

Thank God for life, thank God for death!

MY WICKER-SEAT.

UNTIL I reached the age of thirty, it always puzzled me to understand why Horace, Virgil, Temple, Chateaubriand, Washington, and other "great intelligences," much preferred the country, with its grass and foliage, to the more imposing life of cities.

To-day, when I am past thirty—in fact, approaching forty—I think I understand. They had become philosophers; laughed

at gaudy triumphs; loved their ease; and doubtless had, as I have, a wicker-seat, under a tree, in which they mused and dreamed. It is a rustic, old affair, that would please a poet; the rain and snow fall on it, without harming it; all the day, I think, there is shade there; and the "Cane-bottomed chair" of good old Thackeray was nothing to it—that charming "Cane-bottomed chair," which I always thought the best exposition of the mingled humor and tenderness of that master.

In my wicker-chair, as he in his cane, I have many thoughts. In fact, I surrender myself, there, to the idlest and most agreeable reveries—to fits of musing, to my recollections, and to those day-dreams, which some great philosopher—blessed and honored be his name!—has declared to be the only realities.

But it is to my recollections that I give the most attention. When you are approaching forty, my dear reader—that is to say, the summit, which you ascend to from the plains of youth, and whence your steps go down into the vale of age—at forty, or, as you approach it, memory takes the strongest hold upon your musings, and you live far more in the bright past than in the present or the future. How you smile and sigh then, as you go back to the old days! how the present disappears, with all its ills and *tracasseries*, and the gay old years are the real present of your life!

I am musing, you see; but I stop on the threshold, and come back to the landscape before me, from which I have wandered. It is a charming world which lies before me here—which I gaze upon, from my old wicker-seat, while building my handsome castles and *châteaux en Espagne*. A long, blue range of mountains rises yonder, only a few miles away, and nearer I see ridges, shaggy with their rich evergreens, but smiling, too, in the fine sunlight of the imperial evening. The blue billows roll off to the south, lost in rosy mist; and not far from my rustic seat a stream steals away beneath the drooping boughs of *sycamores*, and through nodding water-flags. I turn my head; and still, in the west and southwest—mountains, mountains! which swim, in dreamy mist, rounding every outline, or rush to the sky like long waves of the ocean, tipped with foamy clouds.

As I muse to-day, the sun is setting in a blaze of splendor. What a spectacle! It is a great, golden shield, slowly sinking down behind the mountain; and the clouds which hang above resemble, you would say, the purple curtains which some dying emperor draws around him, as he passes from the scene of his glory, to the undiscovered realm of darkness. So—slowly and silently—the day goes, and the night comes. An influence, quiet, soothing, breathing immemorial happiness, descends upon the heart as you gaze at the grand spectacle: at this sky all gold and crimson, blue and pink and purple. The rainbows of a hundred summers seem to have been "worked up" into this fine picture, where the clouds are dazzling and take every shape—of hounds upon the traces of the deer; of mighty castles tipped with fire on battlement and casement, through which seem to rush the flames of some great conflagration; of mailed knights, with visor down and lance in rest; of beautiful princesses with slender waists and undulating forms, and shining hair, who sway, and bend, and smile, saluting me as I gaze upon them—me, their king!

That is fanciful, you perhaps say. Well, I have just been reading Tennyson, the prince of singers, and a long procession of bright scenes and figures has passed over the page—the bold Geraint, and Enid, Yniol's child; and Vivien, fair and false and frail; the great Launcelot, Queen Guinevere, and, sweeter than them all, Elaine, the lily maid of Astolat. What a world of *faery* the great poets live in! Their very dreams seem dipped in the hues of sunlight—they float along in silken-sailed galleys, to aerial music, over glassy seas, or blue waves tipped with foam. I think Tennyson is the prince of all who are living to-day; but he is not a mere dreamer. In this book of *Idyls* he has shown his real strength. It is full of the huge muscle and sonorous music of the old giants of the language; and the soil

beneath the trampling feet of the chevaliers bursts into gorgeous flowers, such as grow nowhere else but in Milton and Shakespeare. It is not the violet or the daisy that springs here, but the great crimson "giant of battle" rose. And yet the sounds and sights are not deafening and dazzling. The sweetest cadences of song chime in, and white lilies peep up here and there between the clashing hoofs of the war-horses. The lance-thrusts and the thunder flush your pulses, but the sorrows of Elaine and Guinevere fill the throat with tears; for the master plays upon your heartstrings at his will!

Thinking of all those fine figures, I take up the volume beside me to resume my perusal, when, turning my eyes from the grand sunset, I perceive that I have laid my hand upon and opened—"Salmagundi!" What a descent! but what charming humor, if you must have humor, in place of the fine frenzy of the king of poets! I like the "minor works" of celebrated authors, often more than their more famous productions; and I am not certain that I do not prefer "Salmagundi" to "The Sketch-Book." What a mine of rich conceits it is!—what riotous, headlong, *insouciant*, grotesque humor it exhibits! It is better than the *Spectator*, or the *Tatler*, or the *Connoisseur*, or the *Town*, those once celebrated volumes depicting the humors of London. Irving and Paulding wrote this book in fraternal collaboration, and they expended upon it their best powers, skimming, I think, the cream of their minds for it. Think of Will Wizard, and Miss Charity Cockloft, and Uncle John, and the whole *dramatis personæ*—of the wit, the humor, the comedy, the sly irony—can any thing be imagined more delightful and Goldsmithian? I am old-fashioned, and like the old gentlemen, and old books, rather than those of to-day. I like Irving and Paulding—and am not sure that the latter is not as good as the former. Has he been adequately appreciated? His style is so pure, idiomatic, graceful, and finished, that the writers of this spasmodic epoch might study it, I think, with advantage. His humor is rich, unforced, and the *vis comica* everywhere breaks out as he writes. His pathos is true, unstrained, and fresh from the heart;—and, if all this be true of him, he is one of the *sidera majora*. The "Autumn Reflections" alone—that delicious specimen of the musical serenity and smiling grace of the old school, now nearly or quite forgotten—is itself sufficient to place Paulding among the most delightful authors of English literature.

He is gone, like Irving—and his books, too, are passing. A few years ago, and the old gentleman was tottering about his garden on the Hudson, and looking at the sunsets and smiling the smile of a philosopher. Doubtless, he had a wicker-seat, like myself. A few years and I, and the little I may have written, will be gone too—like Paulding and the sun yonder, which have both sunk beneath the horizon.

"The night comes when the day goes," says Victor Hugo.

TABLE-TALK.

IT is asserted that the influence of Ruskin in art is fast declining in England, and that with it is likely to disappear the pre-Raphaelite school of painting. Ruskin never obtained any conspicuous influence in art in this country, largely, no doubt, for the reason that many of those traditions of the academies which he so earnestly combated did not have so firm a hold in America as they did in Europe. A few of our painters have imitated the pre-Raphaelite methods, but not one of this school has obtained recognized rank. There are a few, indeed, who every year hang upon the walls of the Academy their strange and puzzling canvases, but these remain almost unheeded, save as objects of occasional wondering gaze. But why should there be a theory in art? Why should a painter study to a method? If systems have grown up in departure from the simplicity and truth of Nature, let the young student banish traditions, and simply set up his canvas under the skies

of heaven, and study to repeat what he finds around him. That Ruskin has done much good in awakening the young painter to this necessity of studying Nature in her naked truth, cannot be denied. But while the pre-Raphaelites, as the result of their theory, often give us purer, truer, and simpler forms, while they have banished conventionality from their studios—where in Nature, or in truth, do they get their ideas of perspective, of color, and of the relation of parts? The theories of pre-Raphaelitism may as well depart, but its influence, in many particulars, can favorably remain.

We all remember that terrible international atrocity perpetrated by the allied forces of England and France in the bombardment of Canton, in 1857. After a protracted diplomatic duel between Lord Elgin on the part of the allies and Governor Yeh, of Canton, on the part of the Chinese, in which the Chinaman beat the Englishman on every point, and beat him so badly that his government did not let the correspondence see the light till several years afterward, the worst party brought to bear its final argument—the cannon of the fleet. "Yield to our demands," said Lord Elgin, "or we will attack the city." "We will not yield," said Governor Yeh; "for we are right, and you are wrong. But we are defenceless, and shall make no resistance." The attack was ordered, and for twenty-seven consecutive hours a mile of gunboats poured shot and shell into an unresisting city swarming with a million inhabitants.

An interesting incident is related to us by a gentleman who was there at the time, and which illustrates the respective qualities of the so-called civilized and barbarous parties in this memorable transaction:

At sunrise, after twenty-four hours of firing, and all the higher buildings adjacent were seen to be knocked into ruins; there appeared opposite one of the French gunboats a little low dwelling which had not been injured. While it was being observed, a door was opened, and one of the barbarians came out. He stood for a few moments, looking up and around unconcernedly, as if inspecting the weather and estimating the prospects of the day, and then returned and shut the door. "Well, there is impudence—the infernal heathen! Who ever saw the like!" ejaculated the beholders on the gunboat. Presently, the door again opened, and the Chinaman emerged for the second time, but now with a washing-bowl in his hand and a napkin upon his arm. Placing the basin upon a heap of brick *débris*, he deliberately proceeded with his morning ablutions. Having washed and wiped his face, and then, in accordance with the Chinese habit, wiped out his bowl, he coolly returned with it to his domicile. The inoffensive act was immediately interpreted as an insult, and the guns were at once ordered to be brought to bear upon the little dwelling, which was blown to atoms in a twinkling, and the wounded honor of the high-minded Europeans was duly avenged.

This immortal outrage had its fitting sequel. When the devastation was thought sufficient, the cannonading was stopped, and officers were sent to get Governor Yeh's submission. But he would yield nothing. "Then we take you prisoner of war; come along with us." But the governor did not move from his seat. The victorious warriors proceeded to lift the arm-chair containing the impassive governor, and carried them both on board a man-of-war. Governor Yeh was then sent to Calcutta, put in prison, and kept there till he died.

No doubt one of the most agreeable things in literature is a thoroughly good short story. At the same time it is one of the most difficult to obtain. We have few or no trained writers in this branch of composition. Our professional novelists rarely attempt the short story, and, when they do, are far from increasing their reputation thereby. Since the time of Poe there has been no one eminently successful in this branch—no one whose invention or art has been sufficient for great success.

A good short story should have one fresh, central incident, two or three well-conceived and sharply-drawn characters, a certain symmetrical unity in construction, a deep significance in the catastrophe or climax—not necessarily a moral, as ordinarily understood, but, as nothing should be purposeless, the short story should illustrate some defect or virtue in human character, or portray some special experience whereby the imagination of the reader may be gratified, his sympathies awakened, or his knowledge of the world increased. It is not easy to fix the limitations to the short story. Its construction is an art, far more so than is generally believed; it has its laws, and bears very nearly the same relation to the novel that the song does to poetry, which always properly possesses one definite idea thrown into a compact, symmetrical form. Writers of short stories cannot hope to attain success unless they make this form of composition a profound study; they must have brevity of expression, conception of character, keen feeling for unity and symmetry in art, and very decided dramatic perceptions. All these qualifications are necessary, but many of them can be acquired by study. There is no reason why we should not have a corps of men and women especially trained in this branch of art, and capable of producing a regular supply of highly-enjoyable novels in miniature.

We call attention to the admirable lecture of Professor Foster, before the Royal Institution, which will be found in our present issue. All who are interested in the disclosures which science is now rapidly making, in regard to the finer mechanism and subtler conditions of life, will find Professor Foster's statements to have a novel and startling interest. The lecture issued in last week's JOURNAL, and the one now printed, will prepare the reader for the study of that central phenomenon of animal life, pulsatile movement, or heart-action, which will be presented next week. That vividness of description and originality of illustration which have given Tyndall so enviable a pre-eminence in the department of physics, are equally exemplified by Professor Foster in treating the subject of Life.

Brief Notes.

DR. WM. F. CHANNING, of Providence, writes to the Boston *Journal of Chemistry*, suggesting a new explanation of the escape of carbonic oxide gas through heated cast-iron stove-plates. He says:

"It is a familiar fact that iron, when heated with carbon in excess, absorbs it with avidity. It is an equally-familiar fact that carburized iron—cast iron, for instance—when heated in the presence of atmospheric air, gives up more or less of its carbon to the oxygen of the air. Now, the cast iron of every stove is subjected to both these reactions. Its inner surface is exposed, while heated, to carbon in excess, and its outer surface to atmospheric air. What happens? Carbon is absorbed within, and carbonic oxide, or carbonic acid, evolved without.

"When the cast-iron stove becomes incandescent—red hot—and the mass approaches a plastic state, is it not probable that a progressive interchange of elements takes place through the whole substance of the cast iron between the inner and outer surfaces, carbon being absorbed continuously within, and evolved, in connection with oxygen, without? This is analogous to the well-known phenomena of electrolysis in fluids, without, however, the determining presence of a galvanic circuit. I have not seen this view elsewhere, though it may have occurred to others. I offer it as the true explanation of the supposed permeability of cast iron to carbonic oxide gas.

"A correct theory in this case is not only of interest in itself, but may lead eventually to important practical results. We have good reason to believe that not only the cast-iron stove, patent in more senses than one in the poor man's house, but also the cast-iron cylinder and radiator, enclosed in the furnace of nine-tenths of our first-class houses, are poisoning, all winter long, the air which we breathe. Where is the remedy? First, ventilate every room; then, either substitute steam for the hot-air furnace, or use a hot-water jacket, or hot-water tubes, instead of incandescent iron, to heat the air. Who will invent a cheap and safe hot-water furnace for our houses, which even a Celt can manage? But who will invent any adequate substitute for the invaluable common cast-iron stove for anthracite? The nearest approach to

It now is certainly the sheet-iron cylinder-stove with fire-brick linings. Unfortunately, this cannot replace the universal cooking-stove."

A new contrivance for saving life at sea has been patented by M. C. J. Laurendeau, of Paris. It is composed of a quantity of thick cork, sufficient to float and sustain a person in the water, and is adapted to the abdomen and a part of the chest; a second supply of thinner cork is placed between the shoulders, and reaches to the nape of the neck. This arrangement is intended to produce perfect equilibrium, the part of the body unfurnished with cork acting as ballast. Should the bather desire to swim under water, the collar is removed, or the buoyant part turned from the side of the principal piece, being furnished with nippers for closing the nostrils, and a pipe or tube to breathe through, the end of which terminates in a funnel of cork, so as to float on the surface of the water. And, finally, a person may remain, and swim a considerable time under water, by making the principal piece of the apparatus both a means of buoying up the body and an air-reservoir, from which the bather expels and draws in air by means of a double tube, the reservoir being divided into two compartments by an elastic partition; but this apparatus is intended only for good swimmers, and it would be necessary to carry ballast.—*Scientific Opinion*.

Dr. I. I. Hayes, who last year received a gold medal from the Royal Geographical Society of London, for having discovered and explored "the most northern land of the earth," has, this year, been awarded a similar honor by the Geographical Society of Paris, and has, at the same time, been created an honorary member of the Royal Geographical Society of Berlin. In relation to the Paris medal, the following letter has been made public:

GEOGRAPHICAL SOCIETY, PARIS, April 6, 1869.

DOCTOR: The Geographical Society of Paris, having examined the scientific results of your difficult and courageous exploration of the Arctic regions, have awarded you a gold medal. Notice has been given to the United States minister at Paris, who willingly will receive the medal in your name, and forward it to you. On the 30th of April, at the general and solemn assembly of the Geographical Society, on the report of the Hon. M. Malte-Brun, reporter of the Commission of Prizes, I am happy, doctor, to have been charged to notify you of this fact, and beg of you to accept, with the expression of my personal admiration for your indefatigable tenacity, the assurance of my most distinguished sentiments.

C. MANNOR,

General Secretary of the Central Commission of the
Geographical Society of Paris.

DR. I. I. HAYES.

Our Transatlantic friends are talking and writing themselves into an excitement over the question as to why oyster-culture has been very successful in France and very unsuccessful in England. The *cacoethes scribendi* of Messrs. Pennell & Buckland has been awakened anew by the theme, and the London *Times* thunders on the subject of the pearly mollusks. The *Scientific Opinion* takes up the subject, and gives its opinion as follows: "There is much more to be learned respecting the oyster than that its young is a ciliated larva which soon becomes attached to foreign bodies; and, indeed, beyond these facts, our present knowledge hardly extends. When the rage for aquaria first seized on the English public, as little was known of the conditions required for the existence of marine animals. It was thought that, when animals and plants were placed together in a tank, all must go on well. The animals, said the *a priori* naturalists, will give off carbonic acid for the plants, and the plants will take up this and give out oxygen to the animals; thus there will be a perfect balance. But the influences of heat and light were altogether forgotten, and many a hapless actinia was sacrificed to ignorance of its mode of life. Soon, however, these conditions were studied, and dark-sided and sloping-bottomed aquaria provided more customary conditions for the 'common objects of the sea-shore.' We have not the least doubt that something of this kind is at the bottom of the failure of oyster-culture. We know not how far the salinity of the water in which the parents are fixed may be prejudicial or not to the life of the larva; and, as to the necessary light, pressure, food, action of currents, amount of organic matter present in water, nature of sea-bottom, and so forth, we are in almost Boetian darkness."

Mr. Charles Dickens has been fêted in Liverpool at a public banquet, at which assembled a goodly number of distinguished people, and where the customary eulogistic speeches were made. It was even hinted that, under Earl Russell's new bill for creating life peerages, Mr. Dickens should, by the magic touch of her gracious majesty, Queen Victoria, be transformed into Lord Dickens. The extravagant praise that is sometimes bestowed upon Mr. Dickens, the London *Spectator* points out, is calculated to do this admirable author injury. "His greatest service to English literature," says the *Spectator*, "will, after all, be, not his high morality, which is altogether wanting in delicacy of insight, but in the complete harmlessness and purity of the immeasurable humor into which he moulds his enormous stores of acute observation. Almost

all creative humorists tend to the impure—like Swift and Smollett, even Fielding. On the other hand, there are plenty of pure humorists who are not creative, who take the humor out of themselves, and only apply it to what passes, like Charles Lamb and Sydney Smith. But Dickens uses his unlimited powers of observation to create for himself original fields of humor, and crowds grotesque and elaborate detail around the most happy conceptions, without ever being attracted for a moment toward any prurient or unhealthy field of laughter. Thus, as by far the most popular and amusing of all English writers, he provides almost unlimited food for a great people, without infusing any really dangerous poison into it. In this way, doubtless, he has done us a service which can scarcely be overestimated."

We must have the realistic in art, at all hazards, especially on the stage, where real streams, real cascades, real ships, and real accessories of other kinds are demanded by a curious and unimaginative public. The latest stretch of realism is that of a Munich theatrical manager, who has in preparation a grand spectacle, "in which the waters of the Rhine will be seen undulating around a rock, and will be crossed by a swimming nymph." Here is a fortune in store for enterprising New-York managers. Think of the effect of a bevy of "swimming nymphs" or a Coney-Island beach-scene, for instance, produced with every realistic aid—a real surf and real swimmers in coquettish bathing-attire, floundering and struggling and panting in the mimic brine!

"Tommy Try; or, What He Did in Science," is one of the most successful of recent attempts to render scientific subjects attractive and plain to juvenile readers. The departments of science to which it refers are principally botany and the habits of animals; but it has something to say about chemistry, entomology, electricity, and even extends its instructions beyond science—into the domain of the fine arts. The pages are enlivened with stories and anecdotes, and the style adopted for the narrative is singularly felicitous. We doubt whether our young friends could find more genuine enjoyment in any recent book than in this. It is liberally illustrated.

The missal which the Empress Eugénie uses, whenever she attends divine service at the chapel of the Tuilleries, is bound in a very curious style. In the cover are to be seen the three consecrated medals which were presented to the empress by Spanish peasants to whom she gave an audience in the year 1866. The empress is possessed of quite a number of similar amulets, most of which she has received from Spain.

The author of the American novels "Stormcliff" and "Hotspur," Mr. Walworth, will publish, this spring, a work entitled "Warwick; or, the Lost Nationalities of America." What the nature of this book is, we do not know, but suppose, from the title, that it is a political fiction, the "lost nationalities" meaning the overthrow of State sovereignty.

It is estimated that, in the course of the last two years, upward of five hundred thousand volumes and pamphlets of anti-Bonapartist writings, such as Rogeard's books, etc., have been clandestinely circulated in France. Three or four hundred pedlars, in all parts of the country, do a very profitable business in this kind of literature.

Of the making of verses there proves to be no end. A late number of the London *Athenæum* has reviews of twenty new volumes of poems—all by new candidates for Parnassus—the greater number of which the *Athenæum* considers worthless.

Messrs. Green and Brown, of the famous London publishing firm of Longmans, Green, Brown & Longman, died recently at a very advanced age, each leaving a large fortune. Mr. Brown was over ninety years of age. His fortune was £150,000, and he left legacies to all his old clerks.

In front of Lamartine's tomb stands a splendid marble statue of his wife, with an inscription composed by the poet himself, and saying, that those dear to the heart of gifted men are permitted to share their sorrows, and, therefore, happier than those to whom their glory belongs.

Queen Victoria, the King of Denmark, the Emperor Napoleon, and the Crown-Prince of Prussia, have model farms. That of Napoleon alone is very profitable. The others are losing concerns.

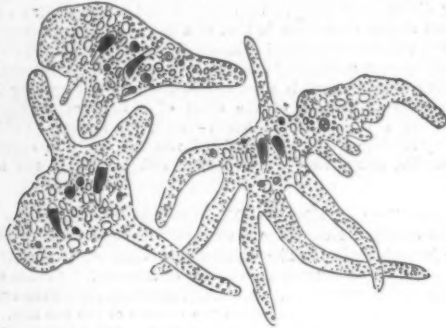
Alexandre Dumas, Jr., will publish, next fall, a work entitled "La Femme Moderne."

Max Ring's "John Milton and His Times" has been issued in an Italian translation at Milan.

General Prim intended to issue, in 1867, a work on the Spanish insurrection, but he was unable to find a publisher either in Paris or in Brussels.

The Museum.

THE Amoeba is a microscopic animal at the very bottom of the scale of living things. It is a minute, shapeless, structureless mass of semi-fluid jelly, or protoplasm, invested with a soft, transparent, and highly-contractile filmy coating. It is without organs of any kind, but has the marvellous power of extemporizing organs as it requires them. Thus, if it wishes to move, it shoots out a part of its body as a temporary foot, and retracts it when no longer wanted. If it desires to seize any thing, it protrudes a false arm for the purpose; and when it has in this way got possession of the needed nutriment, becoming all stomach, it wraps itself round its food, and absorbs or digests it.



The Common Amoeba.

Dr. Carpenter describes it as "changing itself into a greater variety of forms than the fabled Proteus, laying hold of its food without members, swallowing it without a mouth, digesting it without a stomach, appropriating its nutritious material without absorbent vessels or a circulating system, moving from place to place without muscles, feeling (if it has any power to do so) without nerves, multiplying itself without eggs, and not only this, but, in many instances, forming shelly coverings of a symmetry and complexity not surpassed by those of any testaceous animal."

These are certainly singular characters to be combined in one creature, but what shall we say to the statement of Professor Foster, in the lecture which we publish this week, that these odd beings, or some of their cousins, exist in our own blood?

The changes which may be rung upon a peal of bells are absolutely insignificant in comparison to the number of bodies which might be produced by the intercombination of the known chemical elements. An alchemist—one of the last of his race—after contemplating the multitude of created things, and the discoveries of his still-imperfect science, said: "I marvel not that God has created so many things, but rather that He did not, from the materials at His command, create an infinitely greater number."

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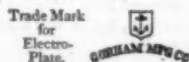
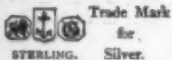
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Among the instrumentalities by which women in old times were taught the discipline of self-restraint, and gradually prepared for their impending emancipation, was the ducking-stool, which was in vogue about a hundred years ago. When a woman gave the scolding rein to her tongue, so as to become a neighborhood nuisance, the town duck-



Ducking-stool for Scolding Women.

ing-stool was wheeled up to her door, and left by way of admonition. If the warning proved insufficient, she was taken to the pond, tied in the chair, and ducked in the water—the number of sousing being roughly proportioned to the supposed desperateness of the case. The practice is reported to have been kept up till the present century; a woman in Liverpool having been dipped in this manner in 1803.

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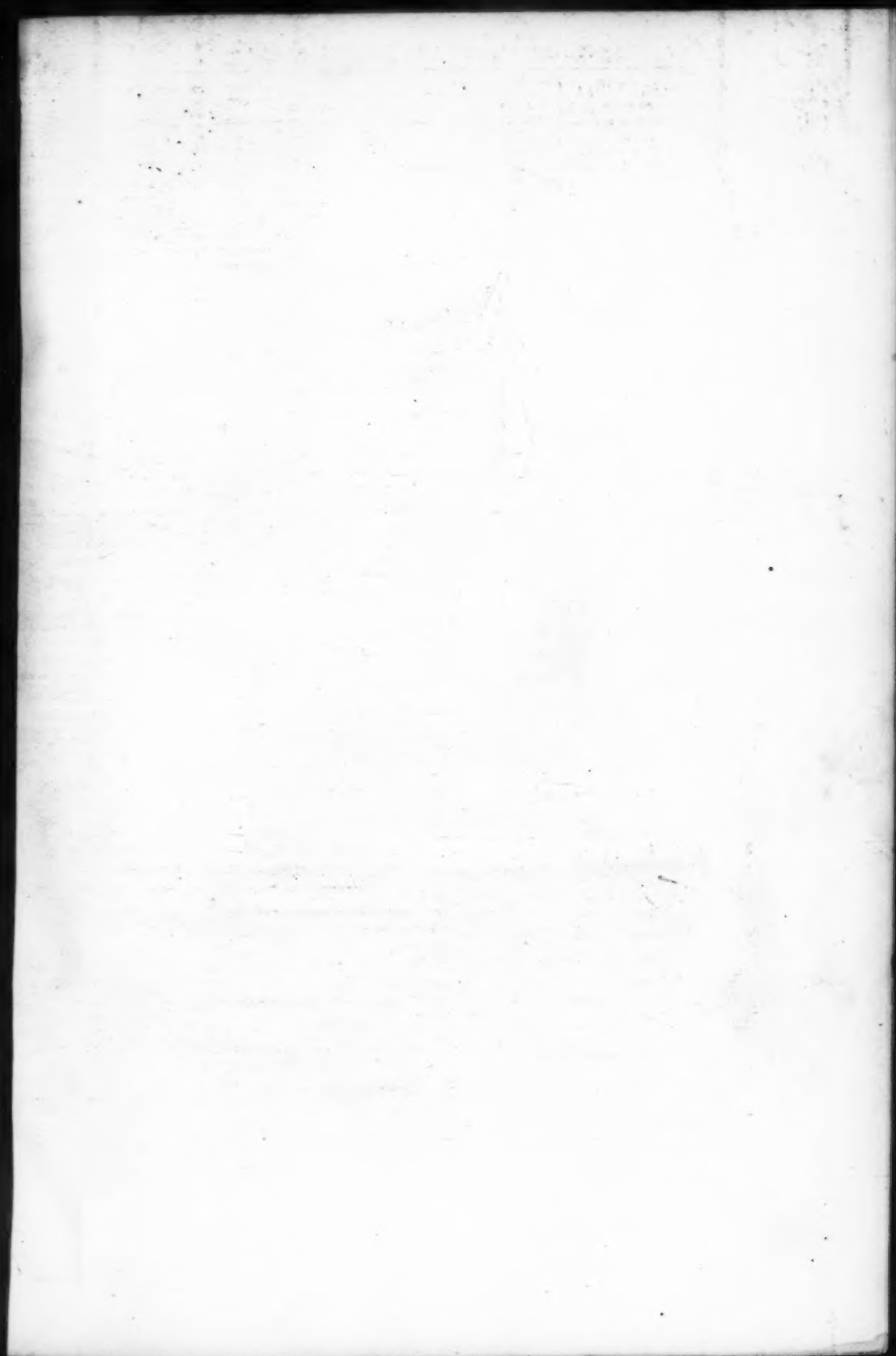
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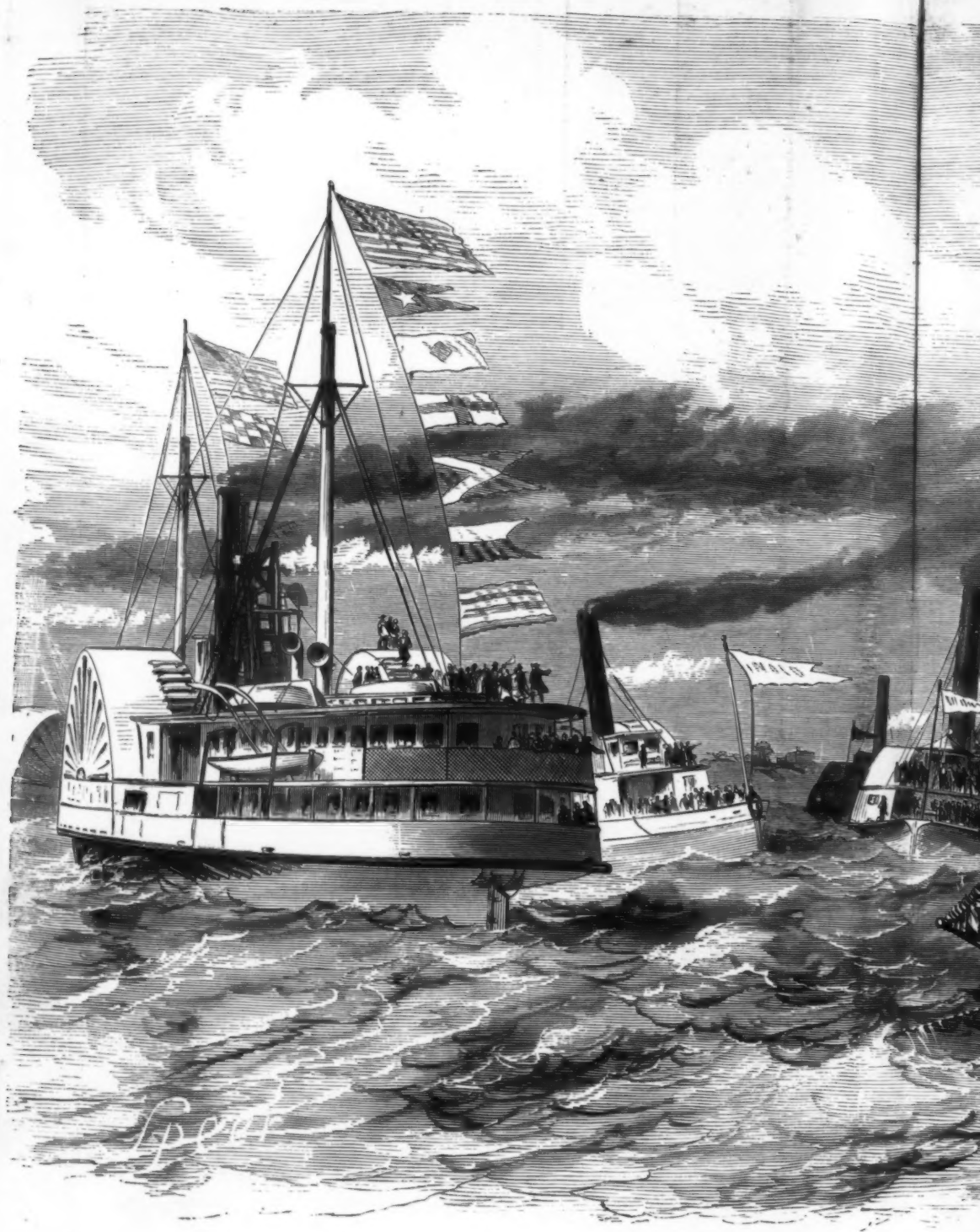
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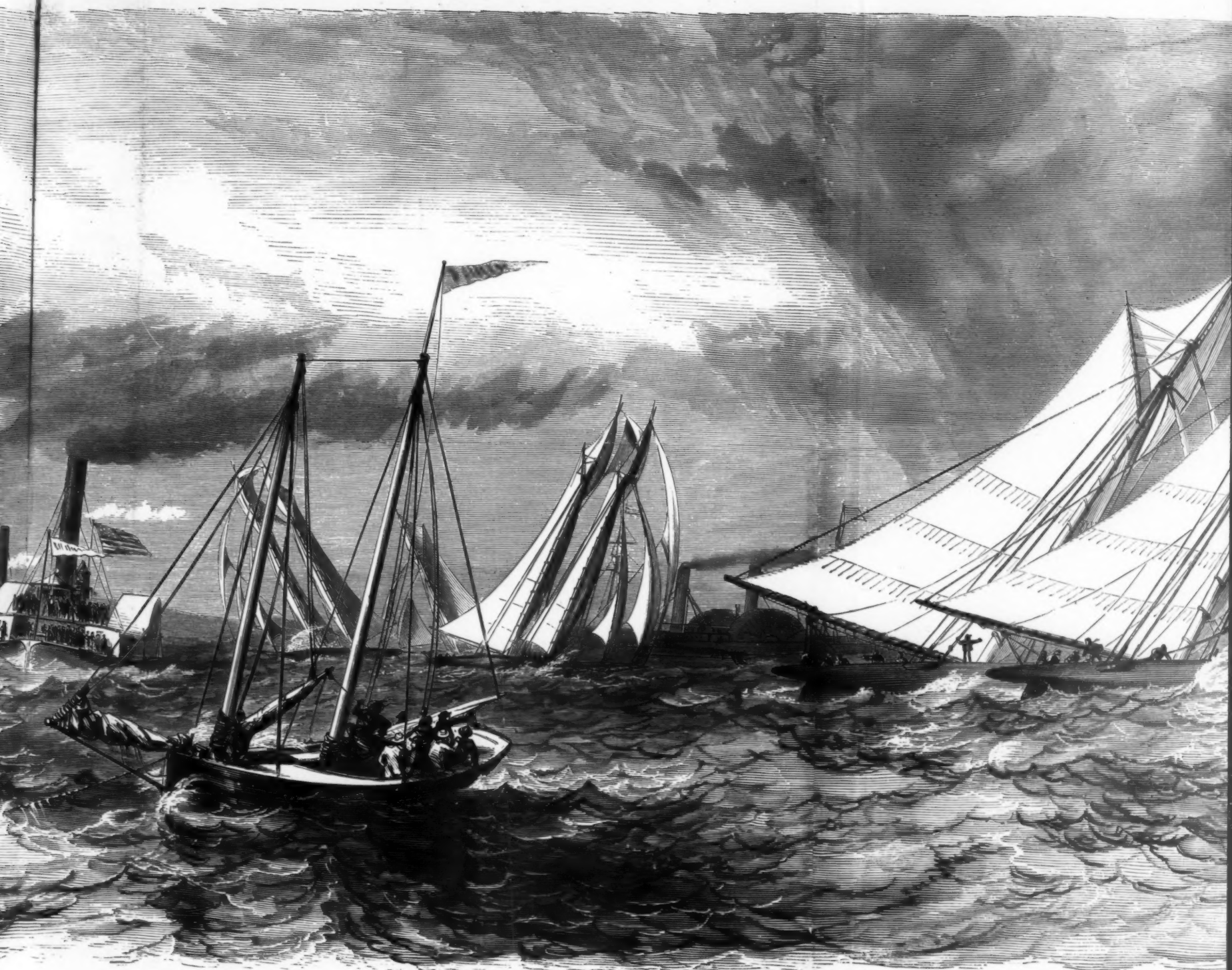
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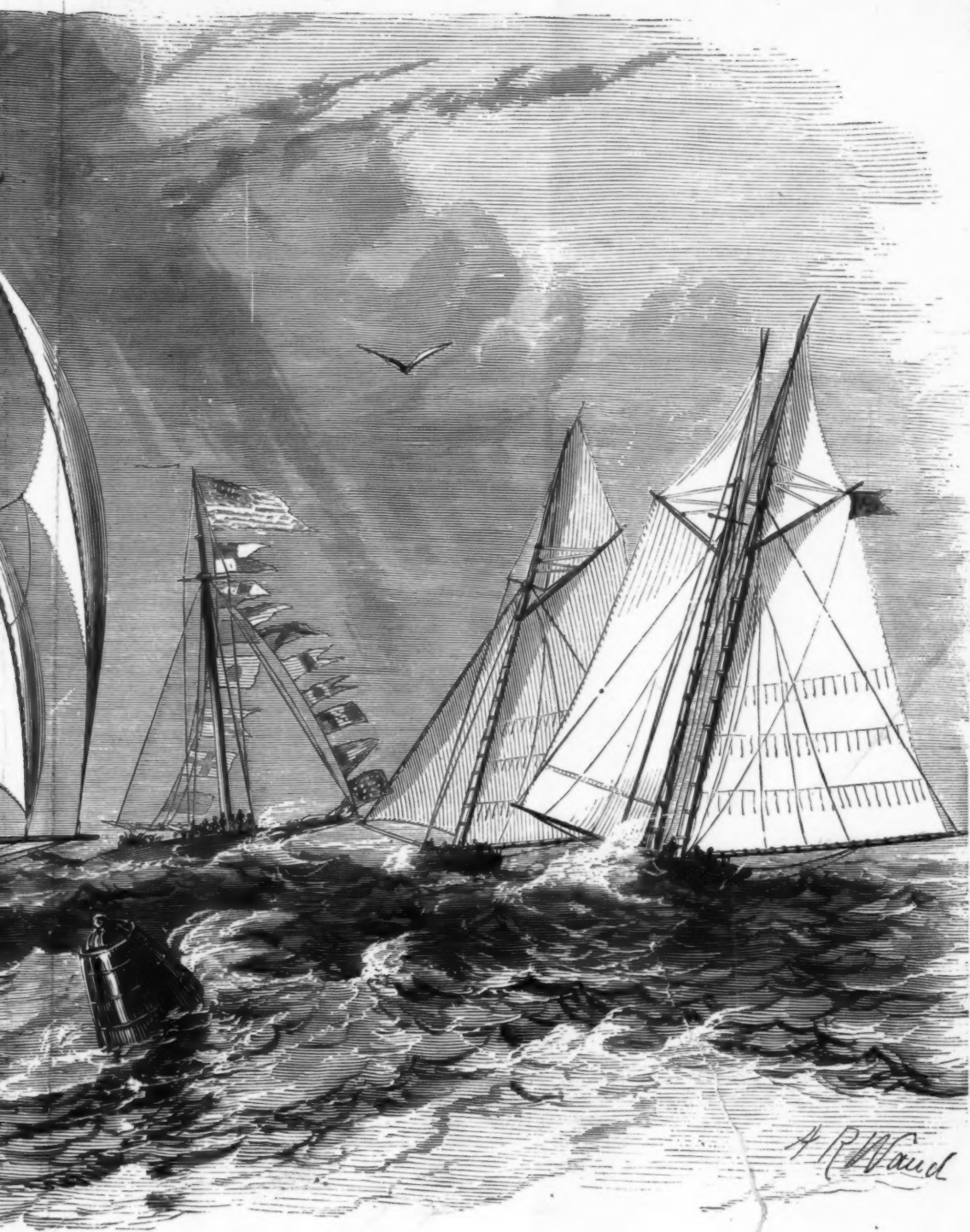
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